

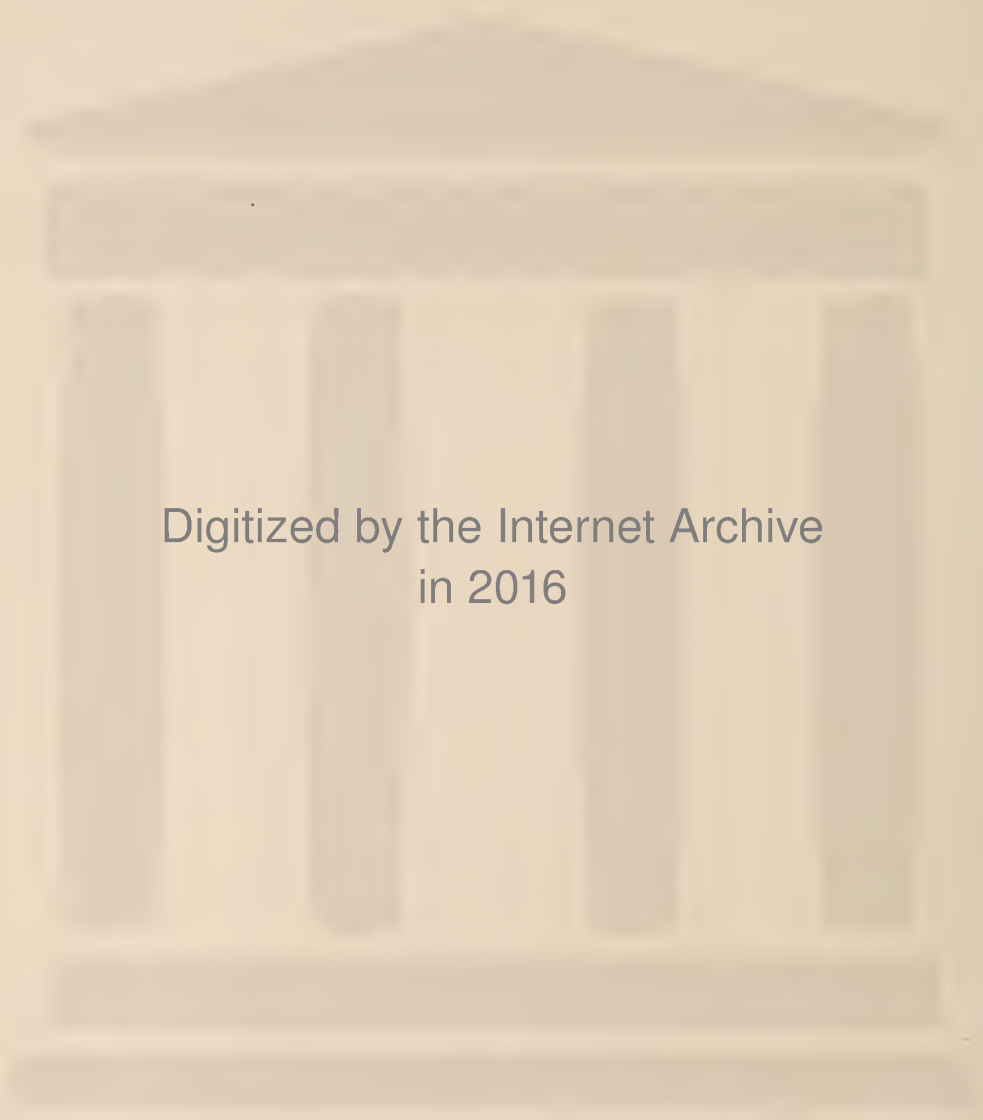
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The Wisconsin Medical Journal

Owned and Published by the State Medical
Society of Wisconsin

A Monthly Journal of Medicine and Surgery

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VOLUME XVI.

JUNE, 1917—MAY, 1918

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INDEX

Page	Page
Abstracts..... 447	Davis, Frank P., Impotency, Sterility & Artificial Impregnation..... 150
...92, 98, 184, 200, 206, 322, 371, 399, 407.	De Lee, Joseph V., Vol. V, Obstetrics. 422
Acidosis, from a physiological-chemical viewpoint..... 187	Despard, L. L., Handbook of Massage for Beginners..... 67
Acidosis, relation of Edema in Pneumonia to..... 83	Dorland, W. A. Newman, American Illustrated Medical Dictionary..... 452
Address in Medicine, Principles & Possibilities in the Dietetic treatment of diabetes..... 231	Dudley, Emilius C., Vol. IV, Gynecology..... 229
Address, Presidential, Wisconsin State Medical Society..... 151	Dumas, J., & Anne Carrel, Technic of the Irrigation Treatment of Wounds by the Carrel Method..... 378
Allen, Frederick M., Address in Medicine—Principles & Possibilities in the Dietetic Treatment of Diabetes..... 231	Fantus, Bernard, Vol. VIII, Pharmacology & Therapeutics..... 422
Ambulatory Automatism..... 404	Fisher, W. A., Cataract, Senile—Traumatic & Congenital..... 112
Anatomy of the Heart, Recent Practical contributions to the Topographical..... 6	Fuchs, Hofrat Ernst, Text Book of Ophthalmology..... 185
Anterior Nares, Corrective Surgery of the Anthrax, Report of two cases of..... 412	Garrison, Fielding G., History of Medicine..... 334
Artificial Feeding of Infants, the..... 49	Gley, E., The Eternal Secretions..... 71
Atrophy, Involution & Hypertrophy, the Chemical Mechanism of..... 349	Greene, Robert H., Diseases of the Genito-Urinary Organs & the Kidneys..... 113
Bardeen, C. R., Recent Practical Contributions to the Topographical Anatomy of the Heart..... 6	Hart, T. Stuart, The Diagnosis & Treatment of Abnormalities of Myocardial Function..... 186
Barrett, E. J., Sketches of Wisconsin Medical History..... 406	Hartzell, Milton B., Diseases of the Skin..... 422
Bartrath, W. H., Duodenal Ulcer in Infants—Report of 4 cases..... 85	Hill, Lewis Wehch, The Starvation Treatment of Diabetes..... 112
Becker, W. F., The Mental Hygiene Movement & Psychiatry..... 379	Jackson, D. E., Experimental Pharmacology..... 150
Biliary Tract, A Plea for More Thorough Operations on the..... 335	Juettner, Otto, A Treatise on Medical Practice..... 31
Black, Nelson M., The Eye in Industrial Accidents..... 435	Kellogg, J. H., The New Method in Diabetes..... 40
Blood Pressure Cases, Classification of the Chronic High..... 200	Kemp, Robert Coleman, Diseases of the Stomach, Intestines & Pancreas..... 71
Bradley, H. C., The Chemical Mechanism of Atrophy, Involution & Hypertrophy..... 349	Keys, Edward L., Urology..... 113
Brown, Horace M., A Review of the History of the Disease now Known as Goltre..... 240	Kolmer, John A., A Practical Text Book of Infection, Immunity & Specific Therapy..... 452
Brown, Horace M., Insurance Companies and the Doctor..... 416-366	Lusk, Graham, The Elements of the Science of Nutrition..... 229
BOOK REVIEWS:	Lydston, G. Frank, Impotency & Sterility, with Aberrations of the Sexual Function & Sex-Gland Implantations. 334
Aaron, Charles D., Diseases of the Digestive Organs, with Special Reference to their Diagnosis & Treatment. 421	MacNutt, J. Scott, The Modern Milk Problem..... 228
Aht, Isaac A., Vol. VI, Pediatrics..... 219	Mayo Clinic, Collected Papers of the, 1916..... 185
Albee, Fred H., Bone-Graft Surgery..... 71	Mix, Charles L., The Practical Medicine Series, 10 Vols..... 229-422
American Medical Association, Nosotrams for Kidney Diseases & Diabetes..... 227	Moorhead, John J., Traumatic Surgery. 113
Ballenger, Howard Charles, Eye, Ear, Nose & Throat..... 112	Munro, Henry S., Handbook of Suggestive Therapeutics, Applied Hypnotism—Psychic Science..... 71
Billings, Frank, General Medicine..... 229-422	Musser, John H., Practical Treatment, Vol. IV..... 227
Blair, Thomas S., Botanic Drugs, their Materia Medica, Pharmacology & Therapeutics..... 40	McNeil, H. L., Clinical & Laboratory Technic..... 31
Brady, William, Personal Health..... 31	Ochsner, Edward H., Physical Exercises for Invalids & Convalescents..... 112
Brown, George Van Ingen, The Surgery of Oral Diseases & Malformations..... 422	Ochsner, Albert J., Vol. II, General Surgery..... 229
Brown, Orville Harry, Asthma..... 111	Otis, Edward O., Pulmonary Tuberculosis..... 114
Bulkeley, L. Duncan, Cancer, Its Cause & Treatment..... 67	Penhallow, Dunlap Pearce, Military Surgery..... 31
Burnham, A. C., Text Book of First Aid and Emergency Treatment..... 111	Pilcher, Lewis Stephen, Fractures of the Lower Extremity or Base of the Radius..... 270
Carman, Russell D., The Roentgen Diagnosis of Diseases of the Alimentary Canal..... 229	Porter, Charles, Elements of Hygiene & Public Health..... 451
Carter, Herbert S., Nutrition & Clinical Dietetics..... 227	Prince, Norman C., The Roentgen Technic..... 112
Cradwohl, R. B. H., The Newer Methods of Blood & Urin Chemistry. 40	Rose, W. D., Physical Diagnosis..... 378
Crossen, Harry Sturgeon, Diseases of Women..... 442	Rosenau, Milton J., Preventive Medicine & Hygiene..... 150
Cushing, Harvey, Tumors of the Nervous Acusticus & Syndrome of the Cerebellopontile Angle..... 452	Rubrah, John, Pollomyelitis in All Its Aspects..... 228
Dakin, Henry Drysdale, A Handbook on Antiseptics..... 378	Strouse, Solomon, Food for the Sick..... 447
	Sutton, Richard L., Diseases of the Skin..... 228
	Thoma, Jurt H., Oral Roentgenology... 270
	Tuttle, George M., Diseases of Children 67
	Wall, Otto A., The Prescription..... 227
	Wallin, J. E. Wallace., Problems of Subnormality..... 270
	Wilkins, Ernest H., Algerton Coleman & Ethel Preston, First Lessons in Spoken French for Doctors & Nurses. 2.6
	Williams, B. G. R., Practical Urinalysis..... 31
	Wood, Casey A., Vol. III The Eye, Ear, Nose & Throat..... 229
	Cairns, Rolla W., Old Age & Disability Pension for Aged & Needy Physicians..... 126
	Camp Life, Training In—Special Article.. 130
	Cesarean, Indications for the Davis..... 319
	Children, Pneumonia In..... 41
	Consumption, Miners'—Special Abstract.. 64
	County Medical Meetings, Outlines for... 122
	County Society and the Laboratory, The.. 124
	Davis Cesarean, Indications for the..... 359
	Dearholt, Hoyt E., Presidential Address of Wisconsin State Medical Society... 151
	Defective Hearing, Recent Progress in the Diagnosis, Treatment & the Prevention of..... 430
	Dernehl, P. H., The Etiology of Primary Glaucoma..... 79
	Diabetes, Ear Affections &..... 165
	Diabetes, Principles & Possibilities in the Dietetic Treatment of..... 231
	Address in Medicine..... 231
	Diagnosis & Treatment of Syphilis, The Wassermann Test in Relation to the.. 423
	Diagnosis of Gonorrhoea, Results of Examination for the..... 27
	Dodd, J. M., The County Society and the Laboratory..... 124
	Draft Examinations, Tuberculosis and the Duodenal Ulcer in Infants, Report of Four Cases..... 85
	Duties of Medical Officers at the Front... 25
	Ear Affections & Diabetes..... 165
	Editorials..... 23, 68, 94, 132, 170, 200, 252, 318, 362, 408, 444
	Elsend'rath, Daniel N., A Plea for More Thorough Operations on the Biliary Tract..... 335
	Evans, Edward, Outlines for County Medical Meetings..... 122
	Eye In Industrial Accidents, The..... 435
	Eyster, J. A. E., The Regulation of the Heart in Health & Disease..... 8
	Farmer, Chester J., Acidosis, From a Physiological-Chemical View Point..... 187
	Fingers, A Plea for Conversation of..... 465
	Focal Infection, The Clinical Examination in Cases of..... 89
	Foerster, O. H., The Wassermann Test in Relation to the Diagnosis & Treatment of Syphilis..... 423
	Forrest, A. E., Compulsory Health Insurance..... 354
	Frew, Jas. W., Duties of Medical Officers at the Front..... 25
	Functional Efficiency of Kidneys, Tests for Estimating the..... 119
	Gilman, Laura Leonard, Results of Examination for the Diagnosis of Gonorrhoea..... 27
	Glaucoma, The Etiology of Primary..... 79
	Golter, A Review of the History of the Disease now known as..... 240
	Golter, Differential Diagnosis of Forms of..... 392
	Golter, Surgical versus Medical Treatment of..... 338

INDEX

Page		Page		Page
27	Gonorrhea, Results of Examination for the Diagnosis of.....	31, 77,	News Items & Personals.....	388
459	Gray, A. W., Health Insurance.....	110, 149, 184, 226, 259, 329, 373, 413, 440, 777		453
1	Greeley, H. P., The Physician—Past & Present.....		OBITUARY:	115
161	Grove, W. E., Corrective Surgery of the Anterior Nares.....	106	Bierbeck, Samuel.....	
459	Health Insurance.....	416	Binnie, John.....	
354	Health Insurance, Compulsory.....	262	Carnachan, George N.....	
430	Hearing, Defective, Recent Progress in the Diagnosis, Treatment and the Prevention of.....	378	Christman, E. G.....	
12	Heart Disease, Some Practical Consideration in Chronic.....	451	Cox, A. J.....	
6	Heart, Recent Practical Contributions to the Topographical Anatomy of the.....	378	Crawhall, George Wilbur.....	
8	Heart, The Regulation in Health & Disease of the.....	416	Cronyn, William J.....	
240	History of the Disease now Known as Goiter, a Review of the.....	378	Cunliffe, Robert A.....	
463	Hitz, H. B., Present Status of Tonsil Removal.....	19	Dalton, Charles C.....	
307	House of Delegates, Session of the, October 4, 1917, 8:55 A. M.....	332	Dudley, Edward Henry.....	
309	House of Delegates, Session of the, October 5, 1917, 8:45 A. M., Auditorium.....	331	Edwards, Hugh J.....	
22	Hygiene for Soldiers, Gilbert E. Seaman.....	575	Evans, J. M.....	
18	Income of the State Society, Ways & Means of Increasing the.....	451	Fraser, A. C.....	
43	Industrial Accidents, The Eye in.....	75	French, Samuel W.....	
453	Industries, Social Medicine in the.....	416	Gill, Joseph P.....	
49	Infants, The Artificial Feeding of.....	262	Goebel, Alfred W.....	
85	Infants, Duodenal Ulcer In—Report of Four Cases.....	416	Gough, Charles R.....	
366, 416, 474	Insurance Companies and the Doctor.....	76	Hay, Thomas H.....	
453	Insurance, Health.....	106	Houck, Oscar.....	
49	Kastner, A. L., The Artificial Feeding of Infants.....	145	Kavanaugh, K. S.....	
60	Laboratory Methods & Their Clinical Applications.....	416	Levings, A. H.....	
124	Laboratory, The County Society and the.....	331	McQuillen, James.....	
63	Lactosuria, Case Presenting Unusual Features—Clinical Report of.....	262	Mills, James.....	
64	Lanza, A. J., Special Abstract—Miners' Compensation.....	378	Oycn, Martin.....	
453	Lemon, Chas. H., Social Medicine in the Industries.....	378	Peaslee, J. H.....	
311	List of Members of the State Medical Society of Wisconsin, 1917.....	219	Russell, Thomas P.....	
17	Lotz, Oscar, Tuberculosis & the Draft Examinations.....	378	Scanlon, C. A.....	
465	Maechtle, E. W., A Plea for Conservation of Fingers.....	451	Slaughter, A. W.....	
331	Marriages.....37, 75, 106, 145, 219, 262, 331	262	Vance, James Ward.....	
332	Medical Advisory Boards.....	331	Webster, George H.....	
406	Medical History, Sketches of Wisconsin.....	136	Williamson, James Louis.....	
777	Medical Officers in France, Observations of.....	56	Obstetrics, Piltultrn In.....	
25	Medical Officers at the Front, Duties of.....	126	Old Age & Disability Pension for Aged & Needy Physicians.....	
311	Members of the State Medical Society of Wisconsin, 1917, List of.....	122	Outlines for County Medical Meetings.....	
412	Mensing, Edmund H., Report of Two Cases of Anthrax.....	12	Patek, Arthur J., Some Practical Considerations in Chronic Heart Disease.....	
379	Mental Hygiene Movement & Psychiatry, The.....	392	Pember, J. F. & T. W. Nuzum, Differential Diagnosis of Forms of Goiter.....	
64	Miners' Consumption, Special Abstract.....	430	Pfister, Franz, Recent Progress in the Diagnosis, Treatment & the Prevention of Defective Hearing.....	
115	Murray, Agnes L., Social Service, An Ally of Preventive Medicine.....	1	Physician, The, Past & Present.....	
41	Myers, A. W., Pneumonia in Children.....	56	Piltultrn in Obstetrics.....	
89	Nadeau, E. G., The Clinical Examination in Cases of Focal Infection.....	41	Pneumonia in Children.....	
		53	Pneumonia, The Relation of Acidosis to Edema In.....	
		404	Powers, Herbert W., Ambulatory Automatism.....	
		151	Presidential Address, Wisconsin State Medical Society.....	
		118	Preventive Medicine, Social Service an Ally of.....	
		400	Pyelitis, Chronic Non-Surgical—Its Etiology & Treatment.....	
		128	Redefings, T. J., Ways & Means of Increasing the Income of the State Society.....	
		359	Roethke, R. W., Indications for the Davis Cesarean.....	
		400	Sargent, James C., Chronic Non-Surgical Pyelitis, Its Etiology & Treatment.....	
		119	Schneider, John F., Tests for Estimating the Functional Efficiency of Kidneys.....	
		81	Schwartz, A. B., The Relation of Acidosis to Edema in Pneumonia.....	
		22	Seaman, Gilbert E., Personal Hygiene for Soldiers.....	
		342	Septic Sore Throat, The Galesville Epidemic.....	
		318	Simulation of Diseases.....	
			Smith, Ernest V., Surgical versus Medical Treatment of Goiter.....	388
			Social Medicine in the Industries.....	453
			Social Service, An Ally of Preventive Medicine.....	115
			SOCIETY PROCEEDINGS:	
			County Societies:	
			Asland-Bayfield-Iron.....	327
			Brown-Kewaunee.....	373
			Calumet.....	217, 327
			Columbia.....	33, 175, 327
			Dane.....	33, 73, 327, 449
			Dodge.....	101, 327
			Dunn-Pepin.....	33, 101
			Eau Claire.....	317
			Fond du Lac.....	141
			Grant.....	73, 101, 327
			Green.....	33
			Green Lake-Waushara-Adams.....	37
			Jefferson.....	327
			Kenosha.....	327
			La Crosse.....	327
			Langlade.....	373
			Manitowoc.....	373
			Marathon.....	33, 327
			Marquette-Florence.....	33, 175, 327
			Milwaukee.....	33, 327
			Outagamie.....	34, 327, 373, 413, 449
			Ozaukee.....	217
			Racine.....	327
			Rock.....	73, 175, 217, 259, 413
			Shawano.....	373
			Shawpeltan-Jackson-Buffalo.....	373
			Washington.....	101, 217
			Waukesha.....	73, 101, 327
			Waupaca.....	327
			District Societies:	
			Fox River Valley Medical Society.....	413, 449
			Interurban Academy of Medicine.....	259, 449
			Ninth Councilor.....	34, 217, 413
			Oshkosh.....	449
			Soo Line Surgical Association.....	175, 217
			Tri-State.....	101, 141, 273
			West Wisconsin Medical Society.....	29
			Wisconsin Surgical Association.....	413, 446
			Sore Throat, Septic—The Galesville Epidemic.....	342
			Stovall, W. D., Laboratory Methods & Their Clinical Applications.....	60
			Syphills, The Wassermann Test in Relation to the Diagnosis & Treatment of.....	43
			Thompson, I. F., Septic Sore Throat—The Galesville Epidemic.....	342
			Tonsil Removal, Present Status of.....	462
			Transactions of the 71st Annual Meeting of the State Medical Society of Wisconsin, at Milwaukee, October 2, 3, 4, 5, 1917, Officers.....	271
			Tuberculosis & the Draft Examinations.....	157
			Tupper, E. E., Piltultrn in Obstetrics.....	56
			Warfield, L. M., Classification of the Chronic High Blood Pressure Cases.....	200
			Warfield, L. M., Lactosuria, Case Presenting Unusual Features, Clinical Report of.....	63
			Wassermann Test in Relation to the Diagnosis & Treatment of Syphills, The.....	423
			Wilkinson, M. R., Special Article—Training in Camp Life.....	130
			Wisconsin State Medical Society, Presidential Address.....	151
			Yates, J. L., Observations of Medical Officer in France.....	476
			Zimmerman, C., Ear Affections & Diabetics.....	165

The Wisconsin Medical Journal

Volume XVI

MILWAUKEE, JUNE, 1917

Number 1

ORIGINAL ARTICLES

THE PHYSICIAN: PAST AND PRESENT.

BY H. P. GREELEY, M. D.,

WAUKESHA.

Professions as well as commercial undertakings should pause every so often for "stock taking." That means in medicine to analyze conditions and standards and see whether there is need for change or whether changes which have taken place are steps in the right direction.

Progress in science needs careful watching and there should be a "clearing house" in all lines of our work. Scientific medicine has in many phases changed the whole aspect of medical practice.

The professional standards and conditions in the large cities are somewhat different from those in the country, owing to dense population and the development of specialism. City standards, however, are not without a very powerful influence on country practice, especially in those suburban towns which are easily within reach of the cities. In the cities one often hears such questions and laments as these:

What has become of the general practitioner? Is he extinct? Has his place been completely usurped by the specialist? And from those who do not approve of specialism: Has the Medical Profession deteriorated? Is it callous and commercial?

In answering these questions we must have clearly in mind the position occupied by the old time general practitioner.

Balzac has given us in the figure of "Le Medicin de Campagne" a superlative example of the general practitioner, a man who was comforter and healer of the sick, moral teacher and magistrate, the Guiding Genius of the community in which he lived. Monsieur Benassis is an ideal which every young practitioner may hold up before himself. It is surprising to me that "Le Medecin de Campagne" has not been included in those selections of works rec-

ommended to young physicians, together with the more philosophical but less interesting "Religio Medici," the inspiring Essays of Sir. Wm. Osler, the fascinating biographies of Pasteur, Lord Lister, Marion Sims, Trousseau and a host of others. Monsieur Benassis is not one of the great physicians of medical history but he typifies the lives of thousands of great *men*, who as physicians have died "unwept, unhonored and unsung" except by the few whose lives they have made worth living.

In order to determine why this type of physician is becoming extinct, let us examine into the causes for his coming into existence. It may be then that his disappearance will explain itself. In the first place, what were the conditions which surrounded the general practitioner a generation or so ago and in what respect have they changed? What was his training?

In 1860 there were thirty-seven medical schools in the United States, only sixteen of which had *any* hospital facilities. Up to 1871, the training in the best schools consisted in two courses of lectures, or two terms of study of a maximum of sixteen weeks each, and in addition to this an apprenticeship with a registered practitioner covering a period of three years. The latter was of course the most valuable part of his education and at the same time most elastic and uncertain as it depended entirely upon one man, whose inclination or whose fitness to teach might have varied from one to one hundred per cent. In 1871 the Medical Department of Harvard University announced a radical change in its curriculum which brought its standard up to that of the continental schools. The change consisted in making didactic teaching continue throughout the greater part of three years. As announced it consisted in "lectures, clinical teaching, recitations and practical exercises." Dissection had previously been the only practical work carried on by the student. Laboratories in any sense of the word as now understood were non-existent. N. S. Davis in his history of medicine in the United States writes in 1855: "There are probably thirty to forty thousand practitioners of

medicine in the United States claiming to belong to the regular profession. Of those residing in the Eastern and Middle States by far the larger proportion have regularly studied three years, attended courses of lectures and obtained a diploma from some medical college." In the South he placed the figures at less than two-thirds and in the West scarcely one-half.

Up to 1850, the highest percentage of students graduating from recognized Medical Schools, was twenty-five per cent of the entering class. In 1872, courses in Physiology, Medical Chemistry, Pathological Anatomy and Surgery were offered at Harvard to graduates. It is evident however, from the discontinuance of this practice that there was no real need felt among physicians that they study these newly developing branches of medical science. Aside from the physician's training there were other factors which strongly contrast with conditions of today. The more even distribution of population and physicians between city and country made competition less keen. Hospitals were few and little used except by the very poor. The people as a whole were not educated to their value as institutions for treatment of disease. They were regarded as the last resort, the final resting place, an "undiscovered country from whose bourne no traveler returns."

We can clearly see, then why physicians of a generation ago were different from what they are today. At that time the medical profession to the wise and conscientious practitioner was truly an art and not a science. The efficiency of a physician depended on the extent of his experience, the accuracy and insight of his observations and the application of experience to practice. Scientific methods of study and the knowledge of the nature of infectious diseases and their control was an unopened book. Preventive medicine was undiscovered territory.

It is not to be supposed, however, that the good old general practitioner was a mediocre physician. On the contrary, according to his lights he was a better doctor than many today and a vastly better man, in spite of the tremendous gain in knowledge and in training since his time. Though his scientific knowledge must be regarded today as meagre in the extreme, his experience, his keenness of observation of clinical detail and his broad humanity were unsurpassed. He studied men and women, not organs and organisms. He won a reputation

for disinterested self-sacrifice and kindness on which the faith of the community still rests. With all his belief in the pharmacopeia, he was wise enough to know that his chief weapons against disease were rarely drugs and other tangible therapeutic agents. He knew that the personal elements of sympathy, cheerfulness and encouragement, together with the common sense of good food and rest did more in contributing to the recovery of his patients than "blood-letting, purging and puking."

He relied on Drs. Diet, Quiet and Merryman. In the light of these facts it is not otherwise than natural that one side of his nature developed more than another. His practice was his school, in which he was continually learning. Life was his laboratory. The natural result was one of the noblest works of God, a physician whose human kindness was his most glorious attribute, of whose passing the world may well say, "Oh, the difference to me."

In our reminiscent lament over the passing or metamorphosis of the general practitioner there is another thing we must remember. As Lowell puts it:

"We're curus critters. Now ain't jes' the minute
That ever fits us while we're in it:
Long es t'wuz future, t'would be perfect bliss
Soon es it's past, thet time's wuth ten 'o this."

The old time practitioner has not lost prestige in the passage of time.

There have been revolutionary changes in medicine and in all other walks of life in the last half century. Medicine has partly conformed and followed suit and partly changed within itself, but has not separated itself widely from the current of progress. In the matter of training, which of course is secondary to the increase of knowledge, the changes have been most startling. Premedical work in science and modern languages equivalent to two collegiate years is required for entrance into the recognized schools of medicine, which follow with four years of most exacting and concentrated training in the fundamental medical sciences and in the clinical and special branches which include ten distinct specialties. The apprenticeship with a physician has given place to one or two years' work as a hospital interne, training which up to the present time has been optional but in several states is already required. Medical schools now graduate over eighty per cent of their matriculants in contrast to twenty-five per cent of the early period.

Even after this training the men of promise are urged to spend still more years in special lines of research. The education which is demanded of the conscientious student of medicine flies in the face of every precept of hygiene and preventive medicine. He has practically no time for relaxation or healthy diversion or exercise. He runs a gruelling gauntlet, and if he survives it is the survival of the fittest or more often the survival of men who are no longer "fit." The physical demands made upon many hospital internes are a shame upon the profession. Complete brain and body fag has become known as "House Officer's Disease."

Aside from this strenuous training the graduate faces now-a-days a very different situation when he gets into practice. Competition is very keen. This is due to several factors: the shifting of the population and increase in urban physicians; the huge development of large municipal and charitable hospitals, which are no longer looked upon as undesirable places for treatment, and which remove from the hands of private physicians large numbers of patients. The growth of the specialties is another potent factor in changing conditions, as will be explained later. The development of surgery with the possibility of bringing immediate relief to patients suffering from the so-called surgical emergencies throws an added responsibility on the shoulders of the general practitioner who is not trained to this work. In the old days they were among the inevitably fatal conditions. Now-a-days the physician who does not recognize them and get immediate surgical assistance is "tried and found wanting." The general practitioner of today is a health officer as well as a physician. Medicine is not standing still. It's rapid advance keeps the practitioner keenly alive today, for what is good for one disease today is obsolete tomorrow.

Standards and conditions of practice have completely changed in almost every instance. Where thirty years ago we spoke of cure, we now speak of prevention.

Fifty years ago students of medicine learned from those whose experience had been longest, now, post-graduate study has become to be a practical necessity for all and the older practitioners go back and are taught by those ten to fifteen years their juniors.

Medical practice in the cities has thus overshot the mark. In the country no such exaggeration of the science of medicine has occurred. In fact, the

science of medicine, regretfully, has not penetrated the country. What the city needs is more humanity and what the country needs is more science. The general public is beginning to recognize the necessity of this and the physician who devotes some of his time every year or two to post-graduate work is beginning to have more respect than the possessor of a long gray beard which no longer carries with it the confidence it once did. To be sure, post-graduate work of a certain type is not to be regarded as a modern invention and advantage. Not only are the public beginning to be desirous that all practitioners keep abreast of the times but they are becoming equally particular what type of post-graduate work their physicians undertake, and here it may be well to digress a few moments to describe the once popular method of post-graduate study no longer desirable or possible.

We all know the enthusiasm with which American physicians have always sought the European clinics of Berlin and Vienna. Hundreds of physicians have each year in the past flocked thither. They stayed varying lengths of time but generally were content with a few weeks or two or three months at the most. To the average layman such study in Europe used to cast a halo of superiority about the physician possessing it. It was a matter of common parlance to say, "Dr. So and So, yes, he has studied abroad in Vienna." In fact most physicians in this country that did serious work and who couldn't go abroad for study looked upon Berlin or Vienna as their Carcassonne. If they never went abroad this fact remained a source of lasting regret or constant longing. Physicians often made great sacrifices in order to visit the foreign clinics.

Many of them were uncritical and easily persuaded of the tremendous advantages of this work. Some were frankly doing it just for a good time and for the advertisement which they knew such a "vacation" would bring them on their return. But I am convinced that there was an ever increasing number of physicians who went with all enthusiasm and expectation and who came back disappointed and disillusioned about foreign study. This in no way is a reflection on the medical profession in Germany for they supplied the demand of the American physician and gave him what he wanted, neither does this statement apply to those who spent a year or more in serious work in foreign clinics. But they are relatively few. They generally re-

mained at one clinic and did not put in an appearance at the large cities. The average physician received his medical pabulum as rapidly and in as large doses as he could pay for it. Go to any lunch counter at home and you may see a similar sight. All the crudities and mannerisms for which we are caricatured are in evidence. From the method of handling table utensils to the manner of stoking food and the peculiarities of our national tastes. In Vienna you could have seen the same phenomena at the medical lunch counter. Some were there for one month and they gorge themselves eating much and digesting little. Others were there for the side shows and the beer and took only food enough to get their certificate, which the University of Vienna issued to anyone who could pay the price of a course, whether he attended or not. Generally courses were served up in German and so rapidly served that the average American lost the meat and only got the names of the courses. Sometimes they attempted to furnish English dishes and then the job was generally botched. The German language alone is an all sufficient argument against post-graduate study for the average American physician. All the teaching is didactic and this, again, condemns it from the point of view of serious work in modern medicine. The laboratory method is after all the only safe one.

In Vienna you found men taking the most indigestible mixtures. Surgeons were "brushing up" in neurology. Gynecologists were taking a little dab from the Freudian School. Many men were listening to the refinements of differential diagnosis in the specialties who know almost nothing of the fundamentals. Most of the patrons of this great medical lunch counter get wildly enthusiastic, but they understand little of what they are eating and you are reasonably certain that they will have mental indigestion of the worst kind if they do not actually become seasick on the return and lose it all. What few misgivings they may have are obliterated by the general air of enthusiasm and the thought that nobody at home is any the wiser.

Physicians at large are now beginning to appreciate the laboratory method in medical education and do not cling to didactic teaching of this lunch counter variety. It is a much easier thing to eat a meal set before you than to prepare the meal for your own delectation. But you cannot learn cooking from eating, neither can you learn medicine from hearing it taught.

A reason for the discontinued popularity of European study is because the general public is educated to the fact that that kind of work and study does not mean knowledge, and a diploma in a foreign language does not now carry conviction with it.

Among the blessings which this country will receive from the great war is the development of post-graduate teaching in this country. Already every big school in the United States has established this department and most of them recognize the need and are doing their work conscientiously and well. Post-graduate work can no longer be looked upon as a summer lark, it is work and hard work. Medicine is progressing so rapidly that busy practitioners cannot keep up with the times unless they give up practice. Medical journals are all very well but what general practitioner reads half as much as he should? In order to really add to his knowledge he must give up his practice and go to school again. If he doesn't the public is not going to think as much of him. Few people realize the extent and rapidity with which medical knowledge is being spread through the popular press and the dissatisfaction of people with a physician whom they think is behind the times. Physicians are coming into practice better and better trained. When a man completes one and one-half to two years' training in a large city hospital and starts in practice he has an immense advantage over the general practitioner who has been in practice fifteen years. If he has ability he is immediately received into a community unless it be an overcrowded city. But if he gets busy he soon begins to shirk his work. He cannot keep up to the refinements of diagnosis and practice that he was taught unless he has great ability and can sacrifice some fees to the equipment of a laboratory and hire an assistant. The public as yet are not willing to pay more for this kind of work and yet the physician cannot give it as cheaply as he used to give his services without an equipped and manned laboratory.

What compromise or plan is going to work out we do not know but it certainly is not right for a man to practice worse than he knows how. And yet there is as great a need as ever for the family physician. Human hearts do not change with the development of science. They cry out for sympathy and encouragement as they always did. How may it be supplied? Can the old time general practitioner be restored? Will he ever again hold

the confidence and implicit faith of the family as he used to? He will be transformed and restored but it must be through the development of co-operation in medicine. It seems almost inevitable that the near future will develop a new kind of practice based on co-operation both on the part of the public and on the part of the profession. Several such schemes are on foot.

A statistical study of small communities would show that each one of a population ranging between four and six thousand souls supports six to eight physicians all fairly busy and generally speaking making a fair living. Such communities pay their physicians perhaps sixteen thousand dollars a year; the two busiest receiving three to four thousand each and the others two to three. Aside from physicians' fees the patent medicine business would claim easily eight thousand dollars. This means approximately twenty-five thousand dollars a year for sickness in a community averaging five thousand souls. Could this money be better spent through co-operation. There is no doubt of it. Such a scheme as is put in practice at the University of California would give the people incomparably better service. If the community hired five physicians representing surgery, medicine, eye, ear, nose and throat and skin, obstetrics and pediatrics and maintained a laboratory with a man in charge to take care of X-ray work and routine diagnostic methods, they would pay no more. These men must all work together in harmony, meeting daily and maintaining a dispensary and consulting with each other about difficult points; learning to know families better than it was ever possible for the old time physician because of the gain in efficiency by division of labor; creating for the community a situation in medicine almost ideal. In larger communities perhaps two such organizations might be built up to favor healthy competition and keep the standard of practice high. The physician would be on a fixed and adequate salary. Is there any reason why he should not be on a professional salary instead of allowing him to do retail commercial work? Should he not be willing to receive a fixed sum for the use of his time?

This of course is only a skeleton of what might be done. There are many widely discussed plans for co-operative medicine on foot. The public may soon seize their opportunity and begin some such organization. Any group of individuals could do it. Neither the public nor the profession seem pro-

gressive enough to move forward with any degree of courage in these matters. But the men with vision assure us that this establishment of co-operation in medicine is only a matter of time.

SWEET GIRL GRADUATES.

In one of the weekly health bulletins which are issued by the Health Instruction Bureau of the University of Wisconsin Extension Division and which are published in nearly 400 newspapers of the state, Dr. H. E. Dearholt, chief of the bureau, calls attention to the exceptional opportunity which the nursing profession offers high school graduates and to the unprecedented demand for new recruits with a good educational foundation as an immediate result of the war. This bulletin, addressed to "the sweet girl graduate" is as follows:

The time is almost at hand when a large number of young women will have finished their high school education and thus passed the point where girlhood merges into womanhood. A considerable number of these will be confronted with the problem of how they may make the most of their lives and opportunities and at the same time prepare themselves to make a living in the work-a-day world.

Some will wish to "get into the films," the modern substitute for being stage struck. Perhaps the largest number will prepare for teaching because this occupation still offers the most obvious opportunities for genteel professional woman's service. Some will go in for literature through newspaper work and schools of journalism. Many will think solely of matrimony. A few will take up training to become professional nurses.

Because the last mentioned calling has a very great health significance, I'd like to say a few words to young women and their parents concerning it. The fact that there are at the present time splendid opportunities in the profession for an honorable career, a good social position and relatively high financial rewards should be known. How the demand for competent nurses exceeds the supply is indicated by the fact that recently in Milwaukee calls came for more than twice as many nurses as could be secured.

Physicians, hospitals, leaders in the profession and the public generally, do not care to see the wrong kind of women take the work, however. Neither do they wish to see giggly, sentimental, scatter-brained women present themselves for training through counterfeit motives and misunderstanding of what the profession holds forth either in the way of opportunities or of sacrifices. Personal, public, military, Red Cross and industrial interests are all concerned, however, in securing the entrance of more of the very best of American womanhood in the ranks of professional nursing.

To render a public and personal service the Extension Division has published a bulletin on "Nursing as a Vocation for Women" which should be secured by people who are interested in seeing young women make the right and avoid the wrong start in their world. It will be sent free on request.

RECENT PRACTICAL CONTRIBUTIONS TO
THE TOPOGRAPHICAL ANATOMY OF
THE HEART.*

BY C. R. BARDEEN, M. D.,

MADISON.

The past half century has witnessed a remarkable advance in the knowledge of factors underlying infectious diseases and in power to control them. A similar advance has been made in the diagnosis and treatment of surgical conditions and in various surgical specialties. On the other hand in some fields of medicine but comparatively little advance has meanwhile been made. The relative seriousness of the diseases lying in these fields has increased with the better control of diseases lying within the fields in which advance in knowledge has been more rapid. Of the fields in which an increase in medical knowledge and skill is needed, none is more important than that of cardio-vascular diseases.

It is unnecessary at this time to quote statistics from the reports of life insurance companies and from bureaus of vital statistics to prove the relatively increasing gravity of cardio-vascular diseases. The fact is generally admitted. It is likewise obvious that improvements in methods of early diagnosis of these diseases is an essential factor for advance in their control.

Diagnosis of cardio-vascular conditions is based essentially on a study of the action of the peripheral blood vessels and of the heart. Of the more recent methods devised to aid in this field, the most important are those devised for the study of blood pressure, those devised for the study of the conduction mechanisms of the heart, especially the electro-cardiogram, and those devised for the examination of the heart by means of the X-ray.

Apparatus for estimating the blood pressure has come into general use. Advances in this field have recently been described before this society by Dr. Warfield. Methods of study of the conduction apparatus of the heart will be described today by Dr. Eyster. I desire to point out briefly some of the recent practical advances that have come from a study of the heart by means of the X-ray.

Because the heart is much more opaque to the X-rays than the lungs it is easy to get a good

silhouette of the heart either on a radiographic plate or on a fluoroscopic screen. The right and left borders of the heart show distinctly. The diaphragmatic border of the heart is to a greater or less extent obscured by the shadow of the diaphragm, liver and stomach. The left side of the descending aorta just below the arch and the right side of the superior vena cava can usually be fairly clearly distinguished.

From a study of this heart silhouette in various conditions in health and disease it has been possible to gain new insight into what may be termed the living anatomy of the heart. The topographical anatomy of the heart as described in most of our textbooks is based essentially on the conditions found in the thorax after death. These conditions resemble the conditions found in the living most nearly in extreme expiration in a recumbent position. As a rule when a physician makes an examination of the heart the patient is requested to breathe quietly or to hold the breath in moderate inspiration. Furthermore unless the patient is weak the examination is more apt to be **made with** the patient in a sitting or standing than in a recumbent position. The topography of the heart thus usually varies to a considerable degree from that described as normal in the textbooks and one has difficulty in correlating the physical findings with the textbook description. A knowledge of the topography of the heart as revealed by the X-ray should therefore prove of value even to those who do not make use of the X-ray in routine examination of the heart.

From the X-ray silhouette it is possible to determine within limits, the position, shape and size of the heart. The greatest difficulty lies in the obscurity of the diaphragmatic border of the heart caused by the liver and in the obscurities caused by the spine, ribs and the structures entering the roots of the lungs near the base of the heart. Study of large numbers of individuals by means of the X-rays correlated with anatomical studies in the dissecting room and at autopsy makes it possible to a large extent to overcome these difficulties and to make fairly accurate deductions from the silhouette. It is not here the place to enter into a technical discussion of the methods of study used in correlating the heart silhouette with the conditions which it reveals. On the contrary I desire to point out at this time merely a few of what seem to me the more important of these conditions from the

*Read at the 70th Annual Meeting of the Wisconsin State Medical Society, Oct. 4-6, 1916.

standpoint of the general practitioner, reserving for publication elsewhere a discussion of the technical studies leading to the conclusions here expressed. I shall take up in turn the position, the shape and the size of the heart.

The heart varies in position normally in inspiration and expiration and in the recumbent, the sitting and the standing positions. It is higher in relation to the spine and ribs during expiration and in the recumbent position, lower during inspiration and in the standing position. These differences are shown in the accompanying diagrams and need not be described at length. Furthermore the heart as a rule is relatively higher in fat individuals than in slender individuals and, largely because of the larger liver, in children than in adults. The heart is attached to the thoracic wall chiefly by means of the large vessels which enter and leave it. The right side and base therefore, are relatively fixed and the chief change in position takes place on the left side. The apex of the heart tends, therefore, to swing toward the left when the heart is in a high position and downward and medialwards when the heart is in a low position. When one lies on the right or left side gravity tends to displace the heart toward that side.

In pathological conditions, as for instance in tuberculosis, the heart may be markedly displaced by mechanical pressure in the thorax. Into a discussion of these pathological displacements of various kinds we cannot now enter owing to lack of time.

The heart normally varies in shape in systole and diastole and to some extent with change in position. The shape of the heart is markedly altered in various pathological conditions. The heart silhouette most studied is that of the heart in diastole. The main portion of the ventral surface of the heart is taken up by the right ventricle. A little of the left ventricle protrudes near the apex and the tip of the left auricle frequently makes a slight protrusion near the base of the heart. On the right side a considerable part of the right auricle protrudes on the ventral surface. As a rule one cannot make out distinctly the line of division between the right auricle and the right ventricle. The relations of the structures just mentioned to the great vessels at the base of the heart are shown in the outlines used to illustrate this article although their situation to a large extent in any given case has to be deduced from a study of the rest of the heart shadow. In systole the chief

difference to be noted in the heart silhouette is that the lower part of the left border which marks the left ventricle becomes smaller and elevated.

In pathological conditions the shape of the heart may become markedly altered. This is especially true in case of valvular lesions. Thus when the aortic valve is incompetent the left ventricle becomes dilated and hypertrophied and this causes a bulging of the lower left side of the heart silhouette. In case of aortic stenosis there is less dilatation but as a rule hypertrophy of the left ventricle causes a clearly marked bulging. On the other hand in case of mitral insufficiency there is usually a well marked bulging in the upper part of the left border of the heart silhouette. This indicates dilatation of the left auricle. In case of mitral stenosis this bulging is usually less marked but the left ventricle may be relatively small so that the bulging of the left auricle is clear. In case of decompensated mitral disease the right ventricle may become so hypertrophied as to cause a well marked bulging in the lower part of the right border of the heart silhouette. In case of incompetency of the tricuspid valve the upper right side of the heart silhouette bulges markedly. These few examples will serve to illustrate the marked changes in shape which the diseased heart may show. Into the details of these various changes we cannot enter at this time.

The size of the heart in the living may be more accurately determined by means of the X-ray silhouette than by any other means at present at our disposal. Statistics based on a large number of observations have shown that the weight of the empty heart from infancy to old age averages very nearly $1/200$ or 0.5% of the weight of the body. My own studies in the dissecting room and experimental studies on the dog's heart have led me to the conclusion that the normal heart in diastole contains approximately an amount of blood equivalent in weight to the weight of the heart. The size of the normal heart is, therefore, not far from 1% of the size of the body. Study of the heart silhouette of a large number of individuals compared with similar studies of the heart in the dissecting room, the size of which can be fairly accurately determined, has made it possible to construct a table showing the size of the heart silhouette presented by normal individuals of a given weight. I have constructed such a table but believe that it is too detailed for presentation at such a time as this.

It should prove of value chiefly to roentgenologists who deal with cardiac conditions. Certain conclusions concerning variations in the size of the heart based upon my own work and that of others may, however, be of interest to the general practitioner.

These are as follows:

1. The heart of an individual in the recumbent position is larger than that of the same individual sitting up. The heart of an individual in the sitting position is larger than that of one standing. The variation in the size of the silhouette from the recumbent to the standing position may be over 30%. In an average of seven individuals I found the increase from the recumbent to the sitting position to be 7.2%, from the recumbent to the standing position 18.2%. Dietlen found the increase in area in normal individuals from the recumbent to the standing position to be 20%, in individuals with slight cardiac dilatation to be 12.8%, in those with marked dilatation to be 9.5% and in those with hearts recently decompensated to be but 5.6%. He found the change more marked in young than in older individuals. In other words, with a few exceptions, a marked decrease in the size of the heart from the recumbent to the standing position is a phenomenon characteristic of a healthy heart. From the practical standpoint, it is important to remember that if the heart of an individual is examined at two different periods for the sake of noting change in size the individual should be placed in a similar position at each examination.

2. As a rule fat individuals have hearts smaller in proportion to their weights than individuals of normal weight and women of a given size hearts somewhat smaller than men of the same size. Their differences, however, are less marked than those mentioned above and are of relatively less interest to those not specialists in the diagnosis of cardiac disease.

To sum up briefly what I have had to say today:

1. The heart varies in position and size with changes in posture. It lies higher in relation to the thorax and is larger in the recumbent than in the sitting and in the sitting than in the standing position. In general it lies somewhat lower than the position commonly ascribed to it in the textbooks.

2. Valvular disease may produce changes in the shape of the heart which while most manifest in

the X-ray silhouette may to some be determined by percussion. Aortic disease is marked by a bulging of the lower left side of the heart, mitral disease by a bulging of the upper left side, and, if marked, by a bulging of the lower right side. Incompetency of the tricuspid valve may cause a bulging of the upper right side.

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LIBERTY BOND.**

THE REGULATION OF THE HEART IN
HEALTH AND DISEASE.*

BY J. A. E. EYSTER, M. D.,

MADISON.

The really fundamental problem that presents itself in any case of cardiac disease is the functional condition of the heart as a pump. The immense amount of work that has been directed to the study of normal and abnormal cardiac conditions has failed even to suggest any function of the heart other than the mechanical one, that of a pump to propel the blood in the vascular system and to maintain within this system certain conditions of pressure and velocity. What may be termed the functional diagnosis in heart disease, based in part upon the anatomical diagnosis, but in part distinct and of a more comprehensive nature, constitutes the premise upon which must be based the rational therapy of abnormal cardiac conditions. The detection of a leaking valve, or the discovery of an active degenerative process in the cardiac muscle, by the usual methods of physical examination, constitute merely the first step in this diagnosis. Determination of the existing functional state of the heart as a mechanical pump, derived in part from this and many other observations, is a far more difficult process, and yet the really essential one is a basis for treatment. The physician with the most limited experience in cardiac cases is soon impressed by the rapidity of change which may occur in the functional condition of the heart muscle, with little or no change in the ordinary

*Read at the 70th Annual Meeting of the Wisconsin State Medical Society, Oct. 4-6, 1916.

physical signs referable to the heart. In any case of cardiac insufficiency the physician must be prepared to change his estimate of the functional condition from day to day or even from hour to hour. Functional diagnosis in any case; therefore, is made not once but many times and indeed retains its importance in many instances after the patient has, to outward appearances, completely recovered. There is perhaps no more difficult problem that the practising physician is called upon to solve than the proper direction, physical, mental and social, of a case of restored cardiac compensation.

In view of the great and increasing prevalence of cardiac derangements and the great role that they play in shortening and depressing the sum of human activities, no one could deny the inestimable value of a solution of the problem of the functional condition of the heart in any individual at any time as a basis for rational advice and treatment. I for one, believe, that as with most great problems confronting us, the solution will not be found by way of a "Royal Road," a short cut to complete understanding, but must in the future, as now, come from a combination of methods upon which the physician must form a judgment of the condition based upon his knowledge of methods, his skill in applying and interpreting them and his past experience. We will, I have no doubt, find in the future, as we have in the past, new methods which will be of great assistance, but I doubt if we shall find one great method which will alone offer a solution and render all other methods obsolete.

In view of the essential importance of this problem to practical medicine, and of the rapid increase within the past decade of our knowledge of the anatomy and physiology of the heart in health and disease, it is important, I think, to attempt to summarize and systematize, so far as we can, where we stand today in reference to this problem; what are our present capabilities and our hopes for the future. Those of you who have been especially interested in this field and who are more or less familiar with the manifold facts and speculations that have come from the minds of the numerous workers in normal and abnormal cardiac physiology in the past few years, will realize the impossibility of such an ambitious attempt in a short paper. This is what I should like to do, but what I propose to do is to call your attention particularly to a certain aspect of the problem which it seems to me has been less emphasized and less recognized

in the practical application at the bedside than any other of the main considerations involved. What I shall say will be mainly concerned with the influence of certain disturbances in the origin and conduction of the heart beat on the efficiency of the heart as a pump. A fuller understanding of these disturbances, developing within the past few years, has served to make clear their importance in this regard, as well as in reference to prognosis and the possible light that recognition of their presence may throw on the general cardiac condition.

Cardiac deficiency, under which term we may understand the inability of the heart to maintain a normal blood flow under the ordinary conditions of life, may result from a single one or a combination of the following disturbances:

1. Myocardial inflammation, or injury arising from various causes.
2. Valvular insufficiency.
3. An abnormal origin or conduction of the cardiac impulse.

The third type of disturbance has assumed growing importance in the past few years. Indeed it may be said that practically our whole knowledge of this as a definite factor in cardiac disease is a matter of our present century. Our present knowledge could have been obtained only after a more thorough understanding of the normal heart beat. The foundation for this understanding was laid by the experiments and writings of two great physiologists, Gaskell in England and Engelmann in Germany, beginning in the year 1880. The foundation facts derived from this work, upon which our whole modern understanding of the origin and course of the heart beat in health and disease is based, were that there must be recognized within the heart muscle certain different properties or physiological activities and that these properties are differently developed in different parts of the heart. These properties are (1) automaticity, the power of generating a rhythmic excitation or beat, without a corresponding and evident external source of stimulation, (2) conductivity, that property of the heart muscle by which an excitation or beat, arising in one part, is conducted to other regions, causing distant regions to contract, (3) contractility, the power of responding to an excitation by a visible shortening of the muscle fibers, a contraction or systole, (4) irritability, the power of

response, by the development of an excitation, to an evident external stimulus. Of these, the most characteristic is the property of automaticity. The measure of automaticity is the rate of development of rhythmic excitations or impulses. Gaskell and Engelmann showed that in the tortoise and frog the venous end of the heart, the sinus venosus, possesses this power to the greatest degree. This region dominates the rhythm of the rest of the heart and is the seat of origin of the contractions which pass to the auricles and ventricles and causes systole of these chambers. Removal of this dominant region, or interruption of its connections with the auricles and ventricles, results in the cessation of contraction of the heart, or other regions within the auricles or ventricle may manifest automaticity and contractions continue, but at a slower rate. Thus while various regions of the heart are possessed of automaticity or have the capacity to develop it, this property is present in different degrees in different parts. Normally, in the amphibian and reptile heart, it was found that the region of greatest automaticity resides always within the sinus venosus, and it is this region which constituted the "primum movens," the seat of origin of the beat. Excitations or impulses arising within this region are conducted to all other parts of the heart in a certain definite manner, upon which depends the coordinated contractions of the heart. By virtue of its higher automaticity, its capacity for a more rapid development of excitations, this region normally keeps in abeyance or suppression other regions which have this property developed to a smaller degree. If the influence of the dominant region is removed, other regions assume its function of originating the heart beat, with a slow rate of discharge and with certain modifications in the coordinated contractions of the chambers of the heart.

In attempting to apply those generalizations to the mammalian heart, two serious difficulties were at once encountered, the absence of an extensive muscular connection between the auricles and ventricles in the mammalian heart, which was necessary to explain satisfactorily the passage of the impulse from the auricles to the ventricles, and the incorporation of the sinus venosus of the lower forms into the right auricle and its disappearance as a separate chamber. The solution to both of the problems were furnished by anatomical studies, the former by His, in the discovery of the auriculo-

ventricular bundle in 1893, and the latter by the discovery, by Tawara, in 1905, of the nodal tissue of the auriculo-ventricular node, and of the similar tissue comprising the sino-auricular node by Keith and Flack in 1906. It will be impossible in the scope of this paper to discuss these epoch-making discoveries or the abundant experimental support furnished by other workers which has served to emphasize the great importance of these structures in the origin and conduction of the heart beat. The two nodes of the heart, the sino-auricular, lying at the junction of the superior vena cava and right auricle, and the auriculo-ventricular, beneath the endocardium in the lower part of the inter-auricular septum, with the auriculo-ventricular bundle and its extensive connections with the ventricles, forms a part of the heart, differentiated histologically and functionally from the masses of muscle forming the auricles and ventricles. Extensive experimental work has developed the following conception in reference to the function of these histologically specialized portions of the heart.

1. The structures in the heart known as the sino-auricular node, the auriculo-ventricular node and auriculo-ventricular bundle form that part of the heart in which the functions of automaticity and conductivity are most highly developed.

2. The sino-auricular node of the mammalian heart has normally the most highly developed automaticity and is the point, therefore, in which the cardiac excitation arises and from which it spreads to other regions.

3. The excitation, arising within the sino-auricular node, passes to the right auricle and to the auriculo-ventricular nodes by different paths. From the latter it is distributed to the two ventricles.

4. On elimination of the sino-auricular node, the seat of origin of the heart beat removes to some part of the auriculo-ventricular node. This gives rise to the so-called auriculo-ventricular or nodal rhythm in which the normal interval between the contractions of the two auricles and that of the ventricles, the auriculo-ventricular interval, is shortened and may disappear, the auricles and ventricles then contracting simultaneously. Under these circumstances also the rate of the heart is

diminished, because the automaticity of this region is less than that of the sino-auricular node.

5. Elimination of the auriculo-ventricular node leads to the independent or ideo-ventricular rhythms, in which the auricles may be quiescent or may contract after the ventricles. Under these circumstances the seat of impulse formation is probably within some part of the auriculo-ventricular bundle. The rate of discharge is exceedingly slow due to the relatively low automaticity of this region.

6. Elimination of the nodes may result from injury to the nodes themselves or interruption of the paths of conduction to other parts of the heart.

With this modern conception of the heart mechanism as a basis, let us now enquire briefly how various clinical disturbances in this mechanism may impair the functional capacity of the heart as a pump and finally how they may be determined and their importance estimated.

Disturbances in the normal function may be conveniently classified so far as we know their nature, on the basis of the normal physiological properties of the heart. We may thus recognize first, disturbances in automaticity. These may be subdivided into several groups. Disturbances through the extrinsic cardiac nervous supply may alter the automaticity and be responsible for some of the so-called nervous tachy- and bradycardias. Another group may be made to comprise those conditions in which there are produced, at times, discharges arising within or without the normal seat of impulse formation which are out of rhythm with the regular discharge, which disturb the normal rhythm and produce premature, deficient, and often abortive beats. These are the extra-systoles or ectopic beats. The characteristic feature of every extra-systole is its premature character; it occurs too soon after a regular beat to ensure that the ventricle will contain its normal diastolic volume of blood. Every extra-systole, since it displaces a normal beat, and since it is less efficient mechanically than a normal beat, produces a certain disturbance in the mechanical efficiency of the heart. The more premature they are and the greater their number, the greater the degree of this disturbance. A final group under this division comprising disturbances in automaticity includes removal of the seat of impulse formation from the normal position in the sino-auricular node. Under this is included the nodal rhythms, the ideo-ventricular or inde-

pendent ventricular rhythms, and probably, I wish to make this statement reservedly, the distressing functional disturbances of the heart known as auricular flutter and auricular fibrillation. The mechanical disturbance in the so-called nodal rhythms is due to two factors, first, the slow ventricular rate, and second, the disturbance produced in ventricular filling by the abnormally placed auricular contractions. Recent experimental work has shown that the normal auricular contraction, occurring from .15 to .20 seconds before contraction of the ventricle is responsible for from $1/5$ to $1/3$ the total amount of blood in the ventricles at the beginning of ventricular systole. In flutter and fibrillation the mechanical disturbances result from the functional paralysis of the auricles, from the rapidity of the ventricular contractions and particularly from the fact that many of them are premature and abortive.

The second main division comprises disturbances in conduction and under this we recognize partial and complete auriculo-ventricular heart block and the much rarer clinical condition, sino-auricular and sino-ventricular block. As a result of partial or complete interruption of the impulses arising in the more automatic regions, the ventricular rate is slowed. The ventricle may respond to only every second or every third discharge from the sino-auricular node or it may be cut off entirely from the influence of this region and that of the auriculo-ventricular node and beat at an even slower rate under the influence of its own automaticity. The disturbing mechanical factor here is the slow ventricular rate which may be the sole factor in the cardiac deficiency or may be combined with muscular deficiency or valvular disease. The decrease in mechanical efficiency from this factor alone may cause the serious disturbances characteristic of the Stokes-Adams syndrome, an indication of how great a factor ventricular bradycardia from any cause may be in cardiac insufficiency.

The recognition, if possible, of the type of disturbance and its extent is necessarily preliminary to an estimation of its importance as a factor in the mechanical deficiency. Accurate determination of these disturbances is unfortunately more difficult than certain other examinations of the heart, since it requires special apparatus and some special experience in the interpretation of graphic tracings. The two methods which are applicable are the venous pulse and the electrocardiogram. Both

of those methods have a common property which render them alone suitable for this purpose, they record and are the only means by which we may obtain such a record in man, of the contractions of the auricles and ventricles separately. For certain technical reasons the electrocardiograph is somewhat preferable as a method. Like all new methods which are sufficiently interesting and promising to attract wide attention, the electrocardiograph has been disappointing to some because it has not offered all they had hoped or had been led to expect. Notwithstanding much experimental study and many clinical observations, determinations of the functional state of the heart muscle, or the degree of hypertrophy or dilatation by means of the electrocardiograph is surrounded by limitations, qualifications, and more or less uncertainty. The electrocardiograph gives, however, with unmistakable clearness and decisiveness the state of the heart in reference to the part in which the beat is arising and how it is being conducted. With our knowledge of disturbances of this nature, taught us largely through its use in the laboratory and at the bed-side and the recognition of their importance as a factor in cardiac disease, the electrocardiograph has assumed a position of unmistakable practical importance in medical diagnosis and as a guide to cardiac therapy. It has served above all else to emphasize a group of cardiac disturbances of which we have only recently begun to take due cognizance and which are even now too often passed over unrecognized or unconsidered, disturbances which in certain cases serve as the sole cause of the mechanical deficiency of the heart, or more frequently as a contributing factor to this deficiency.

In this brief summary of the normal heart beat and its functional disturbances in disease, I have hoped to impress the importance of estimating, from the viewpoint of the treatment and prognosis, the degree and character of the mechanical derangement caused by disturbances in the origin and conduction of the heart beat, a factor which is present in a large percentage of cases of cardiac disease, and which plays an important role in the functional deficiency of the heart.

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SOME PRACTICAL CONSIDERATIONS IN CHRONIC HEART DISEASE.*

BY ARTHUR J. PATEK, M. D.,

MILWAUKEE.

In submitting a consideration of some facts that have a practical bearing upon our conception of disease of the heart, I will preface my remarks with an apology for their brevity and necessary incompleteness. In selecting but a few facts for presentation—without an effort at systematization—I am aware that there must be and are many others of equal—perhaps even greater—importance and value from a practical and therapeutic standpoint, and which could as well be included, or even substituted. But even these few have a real bearing upon a successful conception of the disease, and I trust I may convey them to you in a manner to emphasize their significance.

Before doing so, however, I would digress a moment in order to call attention to a popular misnomer (emphasized by Stengel): the term "Chronic endocarditis" is commonly used to describe either a compensated valvular defect as evidenced by heart murmurs, or a broken cardiac compensation with heart murmurs. The term is wrongly applied in both instances, because valvulitis in the sense of a chronic and progressive illness, does not exist—(save in the more unusual forms of chronic syphilitic infection). The compensated valvular defect, whose presence is demonstrated by the usual signs, is the result of a previous acute valve disease and constitutes a healed valve deformity, not a continuing—or progressive—affection. Once healed, compensation takes place, nor will it ever again—acting alone—give rise to symptoms unless there be an endocarditis engrafted upon it. Therefore it were well if we dismissed the erroneously used term "chronic endocarditis" when referring to defective but healed valves, and, in its place, speak of valvular defects, or simply of murmurs, or single out the particular name and character of valvular abnormality.

The mechanics of the circulation, or its physiology, must be appreciated in order to properly estimate its pathology. The essential elements in the maintenance of normal circulation are: 1. The propelling or driving power of the heart: 2. The

*Read at the 70th Annual Meeting of the Wisconsin State Medical Society, Oct. 4-6, 1916.

condition of the arteries and arterioles; 3. The vasomotor mechanism, particularly in so far as it pertains to the splanchnic circulation, and controls the mass movement of the blood.

1. *The Propelling Power of the Heart.* We may consider it a fundamental fact that the functioning capacity of a heart is measured by its muscle, not its valves, and that upon the integrity of the heart muscle and its ability to adapt itself to varying conditions, rests the big burden of maintaining a proper equilibrium. In order to prove equal to unusual demands which an exacting economy makes, the heart muscle is compelled to, and does, become hypertrophied. In this manner compensation is developed in healing valvular lesions, and in cases in which excessive strain—through unusual physical effort—is put upon the heart. The opinion is often expressed that the body harboring such a heart is as safely insured against damage from this source as is one whose heart's integrity has never been questioned. This belief is, I am convinced, an erroneous one. True, the hypertrophy that has developed does not necessarily reduce the heart's ability to take up and satisfactorily carry the burden of the body's physical activity, under ordinary conditions. There is a limit to hypertrophy, however, and even when it is considerable the power that can be developed is never so largely in excess of that ordinarily required as in a normal heart. The reserve power of such a heart is reduced, and what Mackenzie calls the "field of response" is therefore limited. When confronted with unusual demands this hypertrophy has frequently proven a blind, and disaster has been the inevitable consequence. Such, per example, is the case of the athlete whose heart, through long education, suits its action to its master's bidding: it becomes hypertrophied, responds to every demand, and makes its owner happy in a consciousness of strength. But an unwonted acute demand, whether in the shape of a physical effort, or a mild or severe infection, or shock, has in many an instance easily broken down this compensation, the much vaunted support been found defective, the much needed mainstay been found a disastrous disappointment.

We must at all times bear in mind that, inasmuch as it is the heart's muscle's hypertrophy that makes possible a symptomatic recovery from a valvular defect, this equilibrium can be maintained only so long as the muscle's integrity is maintained. Therefore, when symptoms of broken compensation

arise in such a case, they do so as a result of muscle—not valve—decompensation. I believe this distinction worthy of emphasis because we have been too prone to consider the valve defect as the object of our solicitude rather than the muscle disabled as a result of that defect. This analysis may seem to have but an academic value, but in reality its proper recognition has a direct bearing upon our therapy, and merits greater attention in textbook essays than has hitherto been accorded it.

2. *Arterial or Arteriole Disease* is very commonly the barrier upon which the heart vents itself in vain, and to which effort, having spent itself, it finally succumbs. We are, in the one instance, dealing with a heart compensated against a valvular defect acquired in early life or in adolescence, and permitting its possessor the enjoyment of perfect health and activity. But with the advent of middle life arterio-sclerotic changes supervene, and the situation at once becomes critical; the inelasticity of the blood vessels offers greater resistance, the heart is overtaxed, and dilatation gradually develops. Or, we may be dealing with a heart that has had to overcome frequent onslaughts in the nature of splanchnic engorgements or mesenteric sclerosis. And lastly, but most important of all, chronic renal disease gives rise to high tension, arterial degeneration, and eventually cardiac disease, with the same disastrous consequences.

3. *The Vasomotor Mechanism* plays a vital part in the maintenance of vascular equilibrium. The splanchnic circulation, being the "largest vascular field in the body," is therefore most concerned in vasomotor influences, and, when disturbed, may affect the circulatory equilibrium. This is a factor in all processes of digestion, in the engorgement which may follow overfeeding, and affects particularly the middle aged and those of sedentary habit. Anginoid attacks are common in these, and especially in the overfed type of individual with large and pendulous abdomen.

Hypertension. Allbutt claims that arterial disease is not the cause of elevated blood pressure, but its result; that high pressure cannot be long maintained without arterial strain, and "that arterio-sclerosis results from long persisting high blood pressure from whatsoever origin." The causes of high pressure are, in individual cases, obscure. Toxemia, renal disease, gout, and other metabolic errors, possibly adrenalin excretion, and poisons,

play a part. In elderly people the blood pressure may be elevated without evidence of renal or other disease. Under the term "Nephritic Hypertension" we refer to the cases of chronic Bright's with hypertension. Where renal disease does *not* exist, an intoxication of obscure origin is probably the exciting cause producing increased peripheral resistance and elevation of blood pressure. This is the type of "Essential Hypertension" which may persist for years with no sign of nephritis or with only occasional slight albuminuria. But these, I think, in many instances are linked with and develop into the nephritic hypertension cases, and when very persistent—often and finally succumb to a uremia. I am wont to consider all persistent high tension cases as *potential* chronic nephritics.

The fallacy of making Arterio-Sclerosis and Hypertension synonymous terms and conditions, is still common enough to warrant mention. It is to be remembered that there may be marked beading of the arteries without hypertension, and soft arteries with high tension. It is rather difficult to reconcile this with Allbutt's statement that high tension precedes—this is—causes arterio-sclerosis, unless one were willing to concede that primarily high tension existed in all cases, as the result of a toxemia, and that—after arterio-sclerosis had developed—the tension became reduced on the basis of Muenzer's theory of the causation of hypertension in arterio-sclerosis; "the blood flows through the large blood vessels as does a fluid through an unyielding tube; there being no periodic distension of the vessel wall, the tension is lowered." (Goodman, *Am. J. Med. Sc.*, April, 1914.)

Far more serious than the cases of marked hardening of the superficial arteries—with or without symptoms, are the cases of hypertension in those of soft arteries. In the latter this disease is dangerous, because it is insidious, and does not incapacitate. In this class are men and women of middle life and of portly frame; men of responsibility, women with large families. These patients look healthy, their radials are soft, temporals not hardened; arcus senilis is present, their hearts somewhat enlarged, systolic pressure as high as 200 to 250, second aortic accentuated. Riesman (*Am. J. Med. Sci.*, 1913, p. 487) calls attention to the frequent existence of a systolic aortic murmur in these cases, and considers this finding of prognostic import; that it means sclerosis of the aorta and coronaries, and therefore indicates a greater

tendency to the development of angina pectoris. As a matter of fact, these high pressure cases, without visible or palpable arterio-sclerosis, are particularly prone to this serious outcome.

Significance of Systolic and Diastolic Pressure. The systolic pressure can best be described as the indicator of the force of the ventricular contraction of the heart; the diastolic as the indicator of the amount of peripheral resistance in the arterial system. The difference between these two is the pulse pressure—the excess force the heart exerts over the peripheral resistance—or, the amount of pressure which carries on the circulation—or, put in other words, that part of the heart's energy which produces the distension of the arteries and is recognized as the pulse. The systolic and pulse pressure readings represent myocardial values, the diastolic arterial resistance. Therefore, the systolic reading alone, while of value, is misleading unless checked up with the diastolic.

When may there be considered to exist a normal balance between the systolic and diastolic pressures? According to authorities, the pulse pressure is normally approximately 35% of the systolic, or 50% of the diastolic reading. Marked deviations from these figures suggest a tendency to—or already the presence of—an unbalance between heart muscle and peripheral circulation. In an effort to properly interpret the clinical significance of these phenomena, W. J. Stone (*J. A. M. A.*, Oct., 1913) has suggested the use of a formula expressed by the pulse pressure divided by the diastolic pressure as indicating the cardiac load and "overload." The more nearly the pulse pressure approaches the diastolic in a case of myocardial disease, the greater is the danger of impending muscle insufficiency. The systolic pressure in this instance is relatively high, and therefore indicates excessive effort on the part of the heart, resulting in overstrain. On the other hand, where the pulse pressure is low, because the diastolic is increased, this excess of peripheral pressure threatens greater danger from cerebral accident.

It is necessary to emphasize this subject because, despite the insistence of recent writers, there is still manifest a great disinclination to deal with any but the systolic reading.

Shall Hypertension be Treated? It must be borne in mind that a high blood pressure is such in a relative sense only, and that not all high pres-

asures demand lowering. In fact, a high blood pressure is undoubtedly frequently a compensatory—therefore conservative phenomenon, a measure of defense, not a destructive process, and is part of a balanced system, just as the hypertrophied heart is an expression of balance—an insurance against accident. Therefore, the administration of vasodilators in all cases of high tension is not only an act of folly, but a positively dangerous practice, and in instances may lead to disaster. When high tension does produce symptoms, it may be reduced to a point where these symptoms cease, and not beyond. Many persons with moderate hypertension have disturbing symptoms, while many with high tension are thoroughly comfortable. Persons of good muscle development and active habit are better able to withstand a hypertension than are the obese and sluggish.

Symptoms. Among the *early* symptoms of cardiac distress may be enumerated: substernal pressure, dyspnea, cough, palpitation, anginoid pain, slight oedema of the legs, gastro-intestinal disturbance, epistaxis, vertigo, faintness, headache, insomnia, tingling and numbness, ringing in the ears, and nocturnal polyuria. I emphasize these symptoms because they are not the severe ones of cardiac decompensation, and because, being mild, their proper interpretation may, in instances, be overlooked. A complaint of polyuria, especially nocturnal, with severe headache, or eye disturbances, in a patient below middle age with high blood pressure, suggests an attack of uremia as imminent.

Among the symptoms enumerated, I would particularly emphasize that of dyspnoea.

It has been stated "that myocardial insufficiency can be expressed in terms of dyspnea; that where there is complete balance between pulmonary and systemic circulation dyspnea is absent on exertion; where incomplete balance, dyspnea occurs upon slight exertion; where the myocardium is insufficient dyspnea occurs even when at rest, and is exacerbated by the slightest exertion, such as talking or eating." When present in a patient with high pressure, there is danger of cardiac insufficiency, and he shall be treated accordingly.

Too much emphasis cannot be placed upon this one symptom—as an indicator of returning heart capacity. It is extremely difficult to appeal to a patient in terms that are purely medical, and that consequently have no meaning to him. To warn

him against an excess because his pulse is arhythmic or too rapid, or because of slight precordial pressure or cough, is frequently an unconvincing argument, and fails to strike home. But by compelling him to recognize that in dyspnea he has an admonishing symptom that is real, that is a tangible flag of distress of which he himself is even more cognisant than his physician, I have found myself able to more easily curb the convalescent's impatience, and guide him to a safer conduct.

Case History. In order to present a concrete example illustrating the compensatory nature of high pressure, and the fallacy, as well as danger, of interpreting cardiac conditions by the systolic reading alone, I wish to cite in some detail the case of Mr. H. S., aged 63, who has been under my observation many years. During the past winter he had occasion to visit northern Michigan. A heavy snow-drift stalled his automobile, and he gave a willing hand to his chauffeur in an effort to push the car through the drift. Unsuccessful, he walked to the nearest town—a distance of three miles—for help, and arrived there in an exhausted state, complaining of heart palpitation and dyspnoea. He called a physician who saw him twice, and expressed his satisfaction that the patient's blood pressure (systolic) of 140 showed a good heart despite the arrhythmia present. A day's rest improved him slightly, and he left for a neighboring city. Symptoms of cardiac distress again arose. Another physician was called, and again favorable comment was made, because of a systolic blood pressure reading of 130-140. Experiencing no improvement he left for his home where I saw him on the following day. He was exhausted, dyspnoic, suffered precordial distress, heart's action was arhythmic, systolic pressure 130, diastolic 100, giving a pulse pressure of 30. The systolic pressure soon fell to 110, and with this there were marked arrhythmia and distress upon the slightest exertion. Improvement in symptoms came with a gradually rising systolic pressure, and when this, after many weeks, finally reached 150, and then 165, the patient felt himself reasonably well, and remains so at present writing.

Now let me trace back this patient's history for a few significant facts. In 1910 a trace of albumen, and a few hyaline casts were found in the urine, and slight dyspnoea upon exertion was complained of. The urinary findings disappeared, nor to my knowledge did they reappear during a five

year period following, although he doubtless was during all this time a latent nephritic, or—we may say—he was suffering from a potential interstitial nephritis.

He presented himself for examination from time to time, rather from a sense of precaution, than because of symptoms. His systolic pressure fluctuated between 160 and 180, the diastolic between 100 and 120, with usually a reasonably normal pulse pressure. Compensation had thus been fully established, and maintained during a period of more than six years, between the driving power of the heart and the peripheral resistance it had to overcome—in other words—the circulation had become equalized. An obscure infection supervened in 1915, followed by a prostatic abscess. Definite signs of chronic nephritis developed, and later uremic symptoms, from which he eventually recovered completely. He remained well until the occurrence of acute cardiac breakdown described above. The long persistent hypertension suggests this to be a case of essential hypertension only; yet when a complication ensued, uremia developed. And now he is again—symptomatically—purely a case of essential hypertension. The deduction of the physicians who saw him at this time was erroneous in that they made their systolic reading of between 130 and 140 the basis of the opinion that the heart was functioning well; whereas, had the diastolic reading been made as well, and the low pulse pressure noted, an acute lowering of the established equilibrium would have been seen, and the acute cardiac breakdown recognized. It required a lengthy dissertation on my part to convince the patient that a systolic pressure of 130 or lower was wholly inadequate for his actual needs, and my insistence that he would not be considered recovered until it had reached its former level of 160 to 170 proved fully justified by the later development.

I believe that clinical facts warrant the generalization that in an individual 55 or 60 years of age, a systolic pressure reading of 130 or under is suspicious of a weak heart muscle, and may indicate the actual cause of indefinite symptoms of distress, irrespective of the heart's sounds and rhythm.

Treatment. It would take me too far afield were I to distinguish carefully between cardio, cardio-renal, and cardio-arterio-renal disease, because the general rules that may be laid down apply to all, although careful analysis of the individual case will, of course, determine the particular procedure.

Treatment varies as to 1) the Stage of Compensation; and 2) Stage of Decompensation.

In the Stage of Compensation every effort must be bent to avoid an unnecessarily early decompensation. The heart must be safeguarded against overstrain. Moderate, but regulated exercise should be encouraged; overindulgence in food and drink discouraged, and all excesses avoided. The diet should not be too liberal, and if obesity exists, should be curtailed or properly selected. The confirmed arterio-sclerotic, that is—cardio-renal patient—should have a low protein diet, and should by a careful regulation of the bowels studiously avoid splanchnic congestion. He is to avoid physical fatigue, but is to indulge in exercise to the limit of his capacity, and must particularly shun anything that may cause undue mental strain. He should preferably have an occupation, but ought to adjust his work so that it can be conducted without unnecessary cardio-vascular strain. Aside from this hydrotherapy may be useful, and drugs may be symptomatically used.

In the Stage of Decompensation, one's attention is first directed to the very effectual first line of defense provided in the body for this emergency in the *Conservative Action of the Liver and Spleen*. This has been emphasized. These two organs are capable of enormous distension, and where cardiac over-dilatation threatens, will provide a ready outlet for the blood which would otherwise cause a rapid and fatal over-distension of the heart. The engorgement of the liver, therefore in cases of decompensation, is not an unwelcome sign. As compensation is again restored this enlargement subsides, and the organ contracts to its normal size. Repeated liver engorgements, if acute, may take place, and recovery follow. With the advent of long-standing or permanent decompensation, the hepatic hyperaemia leads to a low grade inflammation, and eventual secondary induration with resultant permanent enlargement. This passively engorged, sclerotic liver (*Stauungs-Leber*)—once developed—is in itself a reasonably good record of the patient's cardiac history.

Briefly summarized among the measures of relief in broken compensation are:

1. *Rest*—absolute and prolonged—the first essential in every form of decompensation. Later, the heart's response to exercise, and the presence or absence of dyspnoea, are good indicators of its improved function.

2. *Digitalis*, when given in the usual therapeutic dose, does not increase blood pressure, and may be safely given in all cardiac breakdowns. It will often be found useful in small tonic doses, even when systolic tension is high.

3. *Opium* is of incalculable value, and is indispensable in most cases of broken compensation. When combined with digitalis, the latter often has an effect which it cannot produce acting alone.

4. *Diet* may reduce high pressure and relieve symptoms due to hypertension. In cases of decompensation with dropsy, with a pulse of fair volume, the Karrel-Kur (1 quart of milk daily in divided doses, without the addition of other food or drink) is frequently followed by a startlingly quick cardiac response, and an early subsidence of the dropsy.

5. *Depletion* by calomel, blue mass, or other cathartics, is often called for, before digitalis can make an impression upon the disabled heart, because the mass movement of blood gives rise to splanchnic engorgement, thus creating an impediment to the circulation.

6. *Venesection* in high tension with symptoms, is a remedy of no mean value. An acutely oncoming epistaxis has probably often prevented a cerebral accident; we can do likewise with our lancet, and should resort to it more frequently than is our custom.

7. *Vasodilators* I place at the lowest rung in this therapeutic ladder, because—while in very common use—their reputation for service has exceeded their efficiency. They are not heart tonics, and are only to be given where high pressure head symptoms are present, or anginoid attacks exist or threatens; here the vasodilators are indispensable and will often act promptly and excellently, but their action does not extend beyond symptomatic relief, and is very evanescent. When nitroglycerine fails, it may be because too small a dose is given. Several doses, repeated at very brief intervals, may give speedy relief, where the usual small dose fails. Thyroid Extract, while frequently not reducing the tension, will give marked symptomatic relief. I have found it particularly useful in allaying distressing tinnitus and dizziness.

8. Other measures—stimulants, sedatives, and diuretics, are useful also, but those mentioned I consider of prime importance, indispensable in

acute cardiac breakdowns, particularly of the cardio-renal type.

It were gratifying did one feel warranted in asserting that high tension patients—if only their pulse pressures are relatively normal—are in no danger of accident. Experience has taught us to fear these cases, more especially because their resistance is constantly below par, and because they are potential nephritics.

I have thus sketched—under a few chapter headings—disconnectedly to be sure—and necessarily merely in rough outline—a few items that are pertinent to the big subject of arterio-cardio-renal disease. Our knowledge of them is still limited, our therapy halting and uncertain, and its results inconclusive. Despite this-good judgment and advice on our part, and an infinite amount of patience and co-operation on the part of the invalid, will add to his comfort and prolong his usefulness.

DISCUSSION.

DR. THOMAS WILLETT, West Allis: The work of Dr. Bardeen on the position of the heart is one that is not only extremely interesting, but extremely important, showing as it does that the regional anatomy of the thoracic viscera is not a fixed one. For a long time we have known position is only a relative condition in the abdomen, but we have always thought more or less of the cardiac and the rest of the thoracic viscera as being fixed.

This leads us to the reason why we should not have at the same time and in the same way as we do so commonly in the abdominal viscera a ptosis, ptosis being so common in the abdominal viscera.

Dr. Miller has shown us even the relative anatomy of the heart changes from age to age. While in the infant, where the ribs lie at right angles to the spinal column, the angle becomes more obtuse, the viscera gradually descend in the body until in old age the heart even goes ahead of the lowering of the ribs, and the relative anatomy is very, very much lower than it is in the young.

Another change that has not been mentioned, it seems to me, is of considerable importance, in the position of the heart, and takes place where the balance between the abdominal and thoracic tension is changed. Commonly we find in abdominal tumor, in abdominal infection, where the abdominal position is changed, considerable change takes place in the position of the heart. For instance, where in abdominal edema, the heart is way out at the side, you remove that fluid with a trocar, usually you find a dilatation of the heart in that condition, but after removing it with the trocar, the next day study that heart little by little, and it will come around far more than you could reasonably expect by just a reduction of dilatation. I really believe that it is

a shifting also in the entire position of the heart, on account of the lessening of abdominal tension.

The heart in pregnancy. As soon as tension becomes marked—and I do not think there is anybody that has missed that marked loud second tone—the shape of the heart moves outward. While undoubtedly in pregnancy you do get some hypertrophy, it seems to me that the difference in the position of the heart is too much to account for simply on the ground of hypertrophy. Of course we have known the scurvy diffusion, how often that changes the position of the heart, the different diseases of the lungs, and usually ascribe it to the pressure, like an effusion pressure. Very likely that is possible, but still I believe there is also some change taking place in the position on account of loss of balance between the inter-abdominal and inter-thoracic pressures.

Another thing that has struck me is the so-called hepatic heart. Why, even in liver disease, in perihepatitis, gallstone, cholecystitis, have we such a marked change in the sound and in the tone and in the timing of the heart, all out of proportion to the amount of infection present, all out of proportion to the nervous influence produced by the pain, you still get a definite change in the heart action, directly from the hepatic inflammation *per se*, irrespective of your possible temperature and your nervous shock?

The disturbances and conductivity of the heart are very difficult clinically to recognize, without special apparatus. I have often thought of the need of outfitting the hospitals. They are so perfectly fitted out for the surgeon, and how little we internists have in the hospital. Given a clinical thermometer and a blood pressure instrument, and a stethoscope, and a little material for examining the urine, and you can go into the depths of a forest and do just as good work as you can in the centers of population. It is a thing that has been greatly neglected. In the large centers of population the hospitals are fitted out for the surgeons almost wholly. I know that at the University they have an electro-cardiograph, but I do not think there is another in the state. There is nothing with which to study the heart except a man's hands and fingers, and a few little puttering apparatus, and I sometimes think if we had sufficient clinical experience we could almost get along without that. I have seen some of the older men tell within 10 or 15 points what the blood pressure is, by simply feeling. I could not do it, but these men with the large clinical experience, can.

Then another thing: in the large cities we have a great number of heart cases, and we cannot help but feel that even with the work that has been done there is still something that we have not as yet gotten hold of. We get so many cases that puzzle us so much, and we know there is something there, but we cannot find it, we cannot figure it out, no matter how much we work. There is something beyond that we do not know as yet, and I cannot help but feel that with the large amount of work that has already been done on the heart, there is still an enormous amount of work still to be done. There is something just beyond that we have not found as yet.

In the treatment of many of our infectious diseases, for instance, pneumonia and tuberculosis, and tuberculosis in particular the work is very largely a matter of the study of the heart. In pneumonia we do nothing except watch the heart practically. In the study of these irregularities of the heart, in the conductivity, I mean, when we get that condition, we are left in a state of absolute helplessness. We know, of course, as Dr. Patek says, that rest is always indicated, food is always indicated, a certain amount of therapeutic exercises may be indicated. But in the matter of remedy, digitalis, which we are afraid to give, is after all our main stay in heart troubles, because we know that in any condition of heart-block which we are not certain of, but strongly suspect, digitalis is going to increase the condition. Opium is the only thing we can fall back on and say practically that we are not going to do any harm, probably because we do not know whether we are or not, but we think we are not going to do any harm.

DR. W. F. ZIERATH, Sheboygan: Mr. President and Ladies and Gentlemen: These were very fine papers, full of pep and punch, and lacking in what our friend "Teddy" Roosevelt has chosen to characterize as "weasel words".

I want to apologize at the very outset of my discussion of these papers by telling you that I am going to talk about myself. I am going to use the personal pronoun "I" very frequently. You know personal experiences are the pegs on which we hang the hat of knowledge, and I am going to tell you about some experiences I have had and things I have learned through these personal experiences.

I really practice medicine, I do not spend my time figuring out how doctors' incomes ought to be figured, I practice. About 3 or 4 years ago I began to have an unusual number of fracture cases. We had an X-ray coil in the hospital. Half of the time it was out of order and the other half of the time it was showing alarming symptoms of getting out of order. I thought it was profitable for me to buy a coil, and I did. I did not have the money to buy the coil with, so I corresponded with one of the companies, and they kindly sold me one on the installment plan. After I had the coil for 14 months, I sent them a check for the balance. I kept account of what I was making on that coil, making a charge against each patient for the use of the coil, and found that it had paid for itself. It has paid for itself many times over. It pays for itself in just the amount of work it does for the patients that I charge them for, and it brings in, indirectly a whole lot of practice. It also enables me to control my patient in my internal medicine cases, not alone the surgical cases, and gives the people the impression that you are doing something for them that is worth while.

Shortly after purchasing the coil I had occasion to make a fluoroscopic examination of the heart and lungs of a number of individuals. I was much impressed with the ease by which the heart outline could be seen, and began to make it a routine to examine every heart case with the fluoroscope, and I do not depend nowadays en-

tirely on percussion to outline a heart. I look at the heart because I find that in checking up my results I am certain to know what the degree of enlargement and hypertrophy in the heart is when I use a fluoroscope, and I am not so sure of it when I use the percussion method.

Every man ought to own a coil. As Dr. Willett has said, the internist has a thermometer and a stethoscope and a blood pressure gauge, but he forgot to mention the coil. It is not because the surgeons are filling up the hospitals with them, it is because you do not buy them, and you ought to have one. I have only a small one. There are a number of good coils on the market.

Dr. Patek has brought up one thing in his paper that I want to draw attention to, and that is the abuse of the blood pressure gauge. The medical profession and the public (the public, thanks to the unconscious efforts of Dr. Evans and Dr. Brady, and others who are writing for the press) have gone to extremes on the subject of blood pressure. Physicians are buying blood pressure apparatus more than ever today, because it is a fad to have them, and they are becoming acquainted with the proper use of the instrument and the proper deductions to make when they find that a patient has high blood pressure. Loading patients up with iodids and other medicine when they have high blood pressure is calculated in a great many cases to do more harm than good. Find out the cause of the high blood pressure. High blood pressure is a symptom; it is a physical finding, that is all, and it ought to be grouped with all the other physical findings in medical cases, and the diagnosis and therapy guided accordingly.

Dr. Eyster, in his fine paper has made one very important practical observation, although he did not dilate on it. He has briefly pointed out that repeated examinations of the heart are necessary in order to judge the progress of compensation or decompensation. An occasional examination with the stethoscope, perfunctorily done, is worse than useless. Advice based on such examination gives the patient a false sense of security. If we would control our cardiac cases, we must constantly keep posted on the physical activities of the patient, and their effect on his heart by frequent, periodic, systematic examinations, using all diagnostic methods, including the fluoroscope and the blood pressure gauge. Only by such a policy can we hope to benefit our cardiac cases and minimize the possibility of an unfortunate termination of their cardiac deficiencies. The summary of the mechanism controlling the rhythmic beat of the heart emphasizes the multiplicity of factors entering into a case of cardiac disease, and the fine judgment and discrimination that must be exercised in sifting the essential from the non-essential, in order that we may control our patients and apply our therapy. Those of us in general practice are, on account of this selfsame multiplicity of factors, inclined to regard our cardiac cases as more or less of a discouraging nuisance, with whose condition we can only temporize. The interminable amount of study, investigation, examination, and mental wear and tear, and the poor reward for all our hard work makes us frequently wish these patients

would consult the other fellow, and in fact we are oftentimes pleased to see them do so.

The vast importance of the whole subject of cardiac disease, its important bearing on our vital statistics, and the encouraging effect of repeated discoveries in the anatomy, physiology, pathology and therapy of the heart, should encourage us to exercise our highest degree of skill in these cases. If bulldog persistence is ever required in medical cases, with less prospect of brilliant results and proportionate rewards, it is in the study and treatment of our cardiac cases; but the only way to get anywhere is to keep on going. I thank you. (Applause.)

DR. O. E. LADEMAN, Milwaukee: Mr. President and Members of the Society: This symposium is not only a timely presentation of the subject, but is given in such a clear and comprehensive manner that I feel I can add but little to its field of usefulness.

With reference to Dr. Bardeen's paper, although aware of the service roentgenology has rendered in cardiac topography, I am not in a position to enter into a discussion of this phase of the subject.

With respect to Dr. Eyster's remarks, it would be difficult for me to elaborate, particularly on that phase dealing with cardiac decompensation arising from abnormal origin or conduction of impulses, a clear conception of which is essential in dealing intelligently with disturbances in cardiomechanism. The recognition of these isolated muscular impulses can only be positively identified by means of the cardiograph, an instrument not adopted to general use. A disturbance in auriculo-ventricular conductivity, on the other hand is clinically recognized by a comparison of the arterial and venous pulse diastolic collapse of the veins of the neck. Although it is not within the scope of the essayist's paper, a few suggestions as to the management of these cases may not be amiss. In the group of extra systoles belonging to the type of auricular fibrillation it is a mistake to use heart tonics unless distinct evidence of muscular insufficiency prevail. As the exciting element of these premature and isolated contractions is perhaps toxic in nature, the rational therapeutic procedure lies in the direction of proper elimination. Often the bromides are of real service in inhibiting irritable cardiac automaticity. I have used digitalis in cases of heart block, fully cognizant of its virtues of lowering auriculo-ventricular conductivity, with beneficial effect. In discussing Dr. Patek's paper, it is quite true the heart is not the only factor in maintaining circulatory equilibrium, yet on the other hand, in order to successfully re-establish a broken compensation, all agents must primarily be directed toward increasing cardiac tonicity. Nature fortunately has supplied the heart with a functioning capacity far in excess of the ordinary demands. Unfortunately we have no accurate means at our disposal to determine the degree of this reserve force. It is a fallacy, as the doctor mentions, to look upon an hypertrophied heart as one endowed with an increase in its reserve force. That which actually exists is a diminished field of response. From both a therapeutic

and clinical viewpoint, I believe it well to classify cases of cardiac decompensation into relative and absolute. Belonging to the former type are those cases which manifest symptoms only on exertion, at rest the patient feels quite comfortable, while those of the latter, at all times are in a state of distress. Therapeutic indications in the relative groups are conservation of cardiac force, and such physical measures primarily directed towards increasing the cardiac tone, as graduated gymnastics, baths, etc. In the absolute type heart gymnastics are harmful, drugs to produce rest and increase muscle tone are indicated. Morphine meets the first requisite, while the digitalis bodies the latter. I am firm in the conviction that morphine is not only free from ill effects, but succeeds when all other measures fail, in not only relieving the subjective symptoms, but has a direct action on the heart by prolonging diastole and increasing systole. The success or failure of the digitalis bodies is not dependent on the preparation used, but the functional responsiveness of the heart muscle itself. Although a bold statement, I feel it can be made without fear of contraction. Failure with digitalis precludes the re-establishment of cardiac compensation of any permanency. The oral administration of drugs in cardiac insufficiency is unreliable, due to the functional impairment of the stomach as a result of passive congestion. Intravenous medication should be the method of choice. The potency of strophanthin needs only to be mentioned. Bleeding is not only a life saving measure, particularly in acute heart failure, but also reduces the state of acidosis, a factor which today must be reckoned with. Drugs acting on the vagus and vasomotor centers play only a subordinate role. Hypertension, especially in cardio-renal disease is to be regarded as a compensatory manifestation and ordinarily demands no interference. Individuals accustomed to living in this sphere of life begin to show signs of cardiac failure when their systolic pressure is reduced below a certain high mark. Vasodilators may be of service in an impending break in compensation with a relatively high diastolic and low pressure.

DR. L. M. WARFIELD, Milwaukee: Mr. President, and Members of the Society. I have been interested in this whole subject of cardiac disease and blood pressure for a good many years, and I was peculiarly gratified, this afternoon, to hear this series of papers given by men who, I know, know what they are talking about.

I do not expect to discuss Dr. Bardeen's paper. I have had some little conversation with him in his laboratory as to what he was doing. Nor shall I discuss Dr. Eyster's paper, with whom I have had many conversations, and who has been of great assistance to me in some of my work on blood pressure. I want to branch out a little bit and talk about one or two things that I have done or that I seem to have determined.

I want to speak first with reference to what Dr. Patek said about the value of the cardiac muscle as being the only part of the heart which really counts in estimating its functional capacity, and also the fact that there was no such thing really as a chronic endocarditis. I should

like to emphasize that point he has made, and feel that the point is peculiarly well taken. I remember that Dr. Osler used to divide his cases of endocarditis as he called them then, into two groups, the endocarditic and the arteriosclerotic. He was accustomed to say that the endocarditic form of endocarditis, that produced by rheumatism in particular, in which the valves chiefly were involved and scar tissue had formed, had a better prognosis than that of the arteriosclerotic type, where the changes were progressive, the valves gradually became more and more sclerosed, the orifices of the coronary arteries became progressively closed, and the myocardium suffered in consequence from lack of nutrition. I think this is a very important and very interesting distinction between the two.

I also desire to emphasize what Dr. Patek has said about the determination of the pulse pressure, and the actually great importance of the pulse pressure. The members of this Society know that for the last few years I have been repeatedly on the floor of this convention urging and insisting upon the importance of the diastolic pressure as one point in the determination of the pulse pressure, because the more I see of cardio-renal and arteriosclerotic cardio-renal cases, the more I am convinced that it is not high blood pressure, the systolic pressure, it is not the diastolic pressure alone that determines largely the prognosis in any given cases, or the treatment in any given case, but it is the pulse pressure, the actual head of pressure which is forcing the mass of blood throughout the system; and I think the more attention we pay to the pulse pressure, the more we will be able to understand some of the curious anomalies that we come across from day to day in our practice.

Now then, in the classification of certain high blood pressure cases, it has seemed to me that on broad lines we can classify them into three groups. Of course these groups merge one into the other, sometimes insensibly, and sometimes not so insensibly, but I think on the whole we can separate out three rather distinct groups.

The first I am going to call the arteriosclerotic group, and it is characteristic of that group that the systolic pressure is high, the diastolic pressure is rather low, or fairly within the normal range, at least under a hundred millimeters of mercury, the pulse pressure is of course high. These patients have large fibrous arteries. They have no determinable interference with the function of the kidney. The specific gravity of the urine is normal, while the functional capacity is normal, as measured by the Mosenthal test, and the 'phtalein output is normal in these cases. These cases, I think, from a prognostic standpoint are the large group of cases that die of cardiac failure, and they are represented in large part by the athlete's heart. Then there is the second group, which I shall call the essential hypertension cases. This group comprises the individual who is large and healthy and strong, and swears he has never been ill, does not know what illness is, is red-faced, plays golf, takes a great many drinks throughout the day but never gets drunk, and is a particularly heavy eater, fond of the good things of life. These cases seem to run in families.

They are characterized by a very high systolic pressure, a very high diastolic pressure, with a pulse pressure which is not very much more than the normal, although it is somewhat more than normal, scarcely ever less than 50 millimeters of mercury. On repeated examination there may or may not be any casts or any traces of albumen. And as I see these cases more and more, I do not believe that the mere finding of a hyaline cast in the urine of the centrifuged specimen means chronic interstitial nephritis. I used to think so, but I do not think so now. These cases are functionally normal, so far as the test of kidney function, in my experience, has shown. These are the cerebral type of cases, and they more often die from hemorrhage into the brain, apoplexy, than they do from cardiac breakdowns, although a patient may have a cerebral attack and recover from it and later on have a cardiac breakdown.

The third type is the chronic interstitial type, the typical red granular kidney, the old-fashioned chronic Bright's disease, with low specific gravity urine, a great deal of urine, nycturia, and the functional capacity of the kidney, as measured by our various tests, decidedly low. In my experience those are the cases that die mostly from uremia, although they too may have a cardiac breakdown eventually. They are the cases that I think belong particularly in the cardio-renal group.

Now just a word or two more. I want to say in response to Dr. Zierath's laudatory remarks about the fluoroscope and heart disease, that the examination of the heart by the fluoroscope gives little information as to the actual size of the heart, because the patient is so close to the diverging rays that an entirely false notion of the size of the heart is given. If, as Dr. Bardeen has done, one takes X-ray plates at a two meter distance where the rays are practically parallel, then the heart can be very accurately outlined. I think that the more skillful one becomes in his percussion the better he can outline the heart, and, while I am not prepared to say that I can outline the heart as well as the X-ray plate at two meters can outline it, I will say that I think I can come very near to it. I should say that in 75 to 80 per cent of the individual cases on an average I believe my figures will come within half a centimeter of the tracings that are given by the X-ray. I think it is all a matter of practice, and a matter of long diagnostic experience.

I want to emphasize too what Dr. Lademan and Dr. Patek have said about the extreme value of rest in cases of cardiac decompensation and in cases of high tension, and also to emphasize what Dr. Lademan said with regard to strophanthin used intravenously. I do not believe that we use intravenous therapy enough. It is an easy way to administer drugs, a perfectly sure way of getting them into the system. You know exactly what you are giving and you can watch the results in the patient much better than you can by the slow and difficult absorption, an unknown absorption, from the stomach and gastro-intestinal tract.

Dr. E. E. AXTELL, Marinette: I am not going to take up any of your time, Gentlemen, in a discussion of these

papers. I want to commend the work of Dr. Bardeen. I do not know much about the other subjects.

I desire to speak a word in regard to the X-ray method of determining the size and shape of the heart. Dr. Zeirath spoke of using the fluoroscope in the way that the ordinary practitioner would use it, and Dr. Warfield spoke of the impossibility of getting correct knowledge of the size and shape of the heart by that method, and Dr. Warfield is perfectly right. You cannot possibly get a good idea of the size of the heart, nor a very good idea of the shape of it, by the ordinary fluoroscopic examination; but there is one method by the X-ray that is exact, by which you can get the exact measurement of the shape and size of the heart, and that is the orthodiagraphic method. I shall not stop to explain the method, but by it you can get exactly the shape and exactly the size of the heart, and in any position that you wish.

DR. C. R. BARDEEN, Madison: I merely wish to say that, while it is impossible to get any accurate idea of the size of the heart by the use of the ordinary fluoroscopic method, I believe that most physicians can, even by that method, learn a great deal about the activity of the heart and of the general relations of the heart, something that really adds to the knowledge of the heart obtained through percussion and auscultation.

THE PUBLIC HEALTH SERVICE IN TIME OF WAR.

EXECUTIVE ORDER MAKING THE UNITED STATES PUBLIC HEALTH SERVICE A PART OF THE MILITARY FORCES OF THE UNITED STATES.

Under the authority of the act of Congress approved July 1, 1902, and subject to the limitations therein expressed, it is ordered that hereafter in times of threatened or actual war the Public Health Service shall constitute a part of the military forces of the United States, and in times of threatened or actual war the Secretary of the Treasury may, upon request of the Secretary of War or the Secretary of the Navy, detail officers or employees of said service for duty either with the Army or the Navy. All the stations of the Public Health Service are hereby made available for the reception of sick and wounded officers and men, or for such other purposes as shall promote the public interest in connection with military operations.

[Signed] WOODROW WILSON.

The White House, 3 April, 1917.

**IF YOU CAN'T SERVE YOURSELF,
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PERSONAL HYGIENE FOR SOLDIERS.*

BY GILBERT E. SEAMAN, M. D., F. A. C. S.

MAJOR AND CHIEF SURGEON, W. N. G.

The subject of personal hygiene of officers and men differs from that of civilians only in the peculiar conditions under which the soldier lives and works. Conditions which of necessity at times are not conducive to ideal personal hygiene. Facilities for bathing and other personal care are often lacking or very restricted. Proper food and shelter are not always available. Proper protection of the body from the elements is not always at hand, and under these conditions men must exercise considerable thought, some ingenuity and a great deal of effort to preserve a clean and healthy body.

I shall only remind you of the basic elements involved in this matter of personal hygiene.

First of all, the soldier must be taught and must understand the importance of *fresh air at all times*. He must have knowledge of the fact that many diseases, such as colds, sore throats, pneumonia, are caused by bacteria, and are promoted by vitiated and impure air, and are not caused by fresh cold air. That the fresh air must not be excluded from his quarters, and that it is necessary to his continued health.

The soldier must not only be given the necessary *exercise for his physical development* and to keep him physically fit and afford recreation, but he should be taught to understand that physical exercise bears a direct and important relation to physical health, that properly indulged in, it increases the strength of the heart and the capacity of the lungs, promotes the stability and control of the nervous system, aids digestion, assimilation and excretion.

Cleanliness of person, clothing and bedding must become a habit of life with the soldier as with the civilian. Some men are naturally filthy in their personal habits and require constant watching, constant supervision, constant instruction, frequent inspections in order to secure and to compel personal cleanliness.

Recruits who have lived under ordinary conditions of civil life in families where the mother or

the head of the household attends to the many matters concerned in personal cleanliness, are apt to be careless or ignorant or both as to the necessities involved in personal cleanliness under military conditions.

Alcohol. Men who are the victims of drink or other vicious habits in military as in civil life are notoriously careless as to the care of their person. Such men must be especially dealt with, and supervised by medical and line officers, and such men are generally those who introduce vermin into the barracks or the camp, and this as is well known constitutes a great danger to military commands in the introduction of camp diseases carried by vermin.

It is generally conceded that the use of alcohol is always harmful, and young recruits especially should be taught its evil affects. It is the duty of the medical officer to advise and encourage temperance in the soldier, and it is particularly his duty to instruct the soldier of the baneful affects, of the cheap and oftentimes poisonous drinks served by irresponsible vendors in the neighborhood of camps. Every military command shows in its sick reports and in its guard records, the bad effects upon men and the loss of service to the army which results from the intemperant use of alcohol, but the army is improving in this respect, and further restrictive measures are proposed. Medical officers, knowing the medical facts concerning the alcohol question, should limit its use in every possible way. The soldier should be taught that alcohol is not a food, that it does not promote warmth, that it does not increase strength or endurance, that its final affects is always depressing, that it predisposes to infections and injuries, to exhaustion, to heat stroke in hot weather and to freezing in cold weather. That it leads to diseases of the heart, blood vessels, kidneys and brain, that it gives rise to digestive disorders and predisposes to typhoid and other intestinal diseases, that those who drink to excess are especially liable to pneumonia and other diseases of the respiratory track. That it robs the government of a man's usefulness as a soldier and prevents his personal advancement.

Water. Soldiers must understand the relation that infected waters bear to disease, that they must not drink water from an unknown or suspicious supply, that water is always rendered safe by boiling for twenty minutes, that it is usually not necessary for soldiers in the field to consume more

*Abstract of Lecture, Wisconsin School for Medical Officers.

than the amount of water which can be carried in their canteen during one days march, and that the canteen should be filled from a known safe supply before the march is begun.

Food. The soldier must accept the food provided by the government, but he is free to use his intelligence as to how he shall eat and how much he shall eat. He should know how to eat and he should know the evils of over-eating. Usually there is sufficient time for the soldier to observe the ordinary proprieties of eating and to chew his food thoroughly except under conditions of active campaign in the field his time of eating is well regulated. The soldier is apt to over indulge in strong black coffee, and he should be warned against this. Coffee three times a day and day after day, in the quantities of a pint or a quart, is too much. This needs no argument with medical men, but the soldier should know it and should know the reason why.

Soldiers are much like children in the matter of over indulgence in green fruits, candies and pastries. They must be treated very much like children in regard to this matter. These things lead to digestive disturbances and to intestinal troubles. These matters can best be handled by the company commander in the exercise of his proper authority over the company mess, and by the camp commander in excluding where necessary irresponsible vendors of harmful foods and drinks.

The soldier should be taught the value of *regular habits with respect to his bowels*, and in the field and on the march medical and line officers must bear this thing in mind in order that soldiers shall have the necessary opportunities to take care of the commands of nature.

Government clothing is usually a good quality, sufficient quantity and seasonable. With the government uniform, a soldier may be neatly, properly and cleanly dressed, and except under occasional conditions in the field this should be demanded of him. The soldier pays for or does his own laundry work. The government supplies him with proper and sufficient clothing, and he should be required to keep it in a neat and clean condition.

Soldiers like civilians should dress so far as possible according to the season and the climate, neither carelessness, perverseness or ignorance should prevent the line officer nor the medical

officer from insisting upon this. Poverty cuts no figure in this consideration. The government furnishes proper clothing to meet the conditions of heat and cold and rain, and excepting under the occasional conditions of campaign in the field, soldiers can and should be well and suitably dressed, and should understand the effect of excessive heat and excessive cold in lowering the resistance of the body, and giving rise to disease. They should particularly be instructed to keep their feet dry wherever possible and to change to dry socks at the first opportunity. Recklessness and carelessness in this particular is as much neglect of duty, as it would be neglect or refuse to carry out any other direction or order. Exposure to strong sunlight and the excessive heat of the sun, should be avoided where possible. The head should have suitable covering, and while it has not absolutely been demonstrated, certain colors, red, black, orange, yellow, are supposed to exclude the actinic rays. Clothes for field service should neither be tight nor too loose, especially across the chest and shoulders, equipment should be as light as possible, arranged in such a way as to interfere as little as may be with motion.

Shoes and care of feet. Ill fitting shoes are a frequent cause of disability, but the shoes of the army have been greatly improved in recent years, and most of the shoes now issued are of good material, proper shape and the number of sizes sufficient so, that with supervision on the part of the company commander, the men may be well shod. The Munson last is quite generally worn in the army, and is an excellent shoe. A proper shoe should be of sufficient size in length and breadth. The fit should be snug, but there should be no pressure exerted anywhere which would give rise to corns or callouses. Every soldier should be furnished with two pair of shoes, and if possible the days work should be begun with the shoes dry and the socks clean. Shoes should be kept well oiled. Care should be taken to have no wrinkles in the socks, there should be no dirt in the shoes, and the lining of the shoe should be intact, or at least all wrinkles and ruff edges removed. Men should be encouraged to bathe their feet every evening if possible, and corns, callouses, blisters and ingrowing nails proper dealt with. On campaign in the field, men should not be permitted to go bare footed and without leggins, for the reason that in addition to the danger of injury to the feet,

there is the added danger of infection through slight injuries which will put the man on the sick report. The soldier who cannot march is generally a burden to any command, whether or not he can march depends primarily upon the condition of his feet. Any trouble with the feet should be cared for at the first opportunity by the soldier himself, by his company commander and if necessary by the medical officer. The man himself should understand the value of bathing the feet, of clean whole socks, of properly fitting shoes, of proper trimming of nails and of the care of the corns and callouses if such develop.

The hands. The soldier should understand and know the reason why the hands must be kept clean and sound, and why it is important if at all possible to wash the hands before taking food in order that such diseases as typhoid for instance may be avoided and in order that cuts and abrasions may not result in disabling infections.

For obvious reasons the hair should be kept short and the beard closely trimmed.

Baths and personal toilet. Soldiers must be made to understand the importance wherever possible of using exclusively their own linen and toilet articles, and this must be a matter of orders. It is only necessary to refer to the fact that parasitic and other skin diseases, venereal disease, trachoma and other inflammatory infections of the eye, body vermin, occasionally typhoid fever and small pox may be transmitted through the medium of the common towel, handkerchief, or clothing.

Daily baths should be encouraged where possible and where facilities exist, but soldiers should have drummed into them the fact that in summer under the ordinary conditions of the barrack or the field, baths twice a week are necessary, and in winter at least once a week, in order that they may keep their bodies clean, and that the underclothing should be changed at least once a week, and preferably twice a week if possible depending upon conditions.

The teeth. In military as well as in civil life it is well known that from a sanitary standpoint, the mouth is most to be neglected, and that many diseases such as digestive disorders, malnutrition, focal infections, systematic poisoning, anemia, etc., are caused or promoted by the neglect of the teeth.

It is only in recent years that the soldiers teeth

have received the necessary attention, and that men skilled in dentistry have been made use of in the army. Many soldiers when they first go into the service, seem hardly to know the use of a tooth brush, and their mouths are in bad condition, their teeth decayed by reason of this lack of knowledge or by reason of neglect. They do not seek relief until they are afflicted by pain. In my opinion soldiers' mouths should be carefully inspected and soldiers carefully instructed in the care of the mouth. It seems to me that if it is important to inspect weekly the mules and horses on the picket line for evidence of disease, and if an officer is to be held responsible for the physical condition of his stock, just so he should be held responsible for the physical condition of his men. Company commanders and medical officers should therefore instruct every man to have a tooth brush and to use it at least twice daily. They should be instructed how to use it, in order that they may remove from the teeth and the gums all particles of food or other foreign matter, brushing away from the gums in all cracks and crevices. They should understand the importance of the removal of any pieces of meat or other food by the use of a tooth pick if necessary, and above all they should be encouraged to proper consult a dental surgeon or medical officer concerning any trouble arising in the teeth or gums. The dental surgeon will give them proper treatment and the medical officer can at least give them proper advice.

Venereal disease. The control of venereal disease has always been a serious problem in all armies. In our service at the present time, it is reasonably controlled by the use of compulsory methods of venereal prophylaxis which are fully set forth in M. M. D., page 75, pars. 198, 199, 200, and in chapter on prevention of disease, but soldiers, specially young recruits, should be taught at every opportunity the evils and dangers involved and the necessity and value of preventive measures. This matter is a serious menace to all armies, and must be relentlessly and rigidly dealt with.

Much disease may be prevented by the proper instruction of men and by positive orders preventing careless spitting and otherwise soiling the grounds and quarters of camps and barracks. It is only necessary to refer to the importance of this matter. Where men live in close quarters as they often do under military conditions, it is more than necessary to rigidly enforce preventive measures against

typhoid fever, diphtheria, pneumonia, venereal and other diseases.

Men in groups as soldiers are, can always be appealed to on the score of common decency and patriotism, and where they do not respond to this appeal the necessary orders may be enforced, and where this does not correct any existing evils, and certain individuals constantly violate orders and ignore appeals, such individuals may be reached by a tactful and sensible officer, through the appeal to the group, that the interest of one and the conduct of one of their group affects the interests of all, and particularly has a bearing upon the reputation and the efficiency of the group. In other words, the development of the use of the esprit de corps.

The following are laid down by Ashburn (Military Hygiene) as the Golden Rules of Personal Hygiene, and in my opinion set the matter forth in as few words as could possibly be used. They will bear repetition.

1. Be clean in person, clothing and surroundings.
2. Eat no food but good food, and only with clean hands.
3. Drink no water from unauthorized or doubtful sources, unless it is boiled,—plain, or in tea or coffee.
4. Abhor, avoid, and destroy vermin, whether lice, fleas, ticks, flies, mosquitoes, roaches, mice, rats or other varieties.

Wisconsin—Typhoid fever caused by infected drinking water.—The Wisconsin Supreme Court held that the death of an employee from typhoid fever caused by drinking impure water furnished by his employer was "proximately caused by accident while he was 'performing services growing out of and incidental to his employment.'" within the meaning of the Wisconsin workmen's compensation law. (*Vennen v. New Dells Lumber Co.*, P. H. R. Feb. 11, 1916, p. 329.)

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DUTIES OF MEDICAL OFFICERS AT THE FRONT.*

BY JAMES W. FREW, M. D.,

MAJOR, MEDICAL CORPS, W. N. G.

The Duties of Medical Officers at the front are in the order of their importance, *first* evacuation of wounded to the rear in order to relieve the fighting force of incompetents and to preserve its mobility; *second*, the medical and surgical care of the sick and wounded, and *third*, the careful keeping of all records concerning the same. All other duties, as outlined in the M. M. D. are merely subdivisions of these great heads and all aim to obtain the results described.

The goal towards which all instruction and training of medical and sanitary personnel is pointed, is efficiency in actual battle. The service of every unit should dovetail together to make a complete and perfect machine, and any break in the chain through inefficiency or ignorance will seriously handicap the whole service.

The organization of the various units has been given elsewhere and I will only add here that to each infantry division which is the great administrative and tactical unit of the army is assigned four ambulance companies and four hospitals besides the various regimental detachments. The chief medical officer of a division is known as Division Surgeon and has a rank of Lieutenant Colonel and assigned to him as assistant is one Major.

Two Majors are assigned respectively as *Director of Ambulance* companies and *Director of Field Hospitals*.

All orders governing the movements of sanitary units emanate from the *Division Surgeon*, who is a member of the staff of the commanding general, but these orders must pass through the hands of the chief of staff, for issue or approval, the ideas of the division surgeon being submitted by him in the form of recommendations. During battle the commanding general may authorize the division surgeon to issue orders in his name but even under these conditions the orders must be submitted to the chief of staff for approval. All roads leading to the front and rear are primarily for the use of the fighting force and it is the duty of the chief

*Abstract of Lecture, Wisconsin School for Medical Officers.

of staff to see that nothing, even the transportation of wounded interfere with their availability.

Troops go into battle formation on orders from the commanding general. This order is usually known as the battle order and contains information for the disposition of every unit in the division. *In paragraph four of this order will always be found the orders pertaining to the medical department units*, which information has been received from the division surgeon as a recommendation. In the ordinary battle formation field hospitals and ambulance companies will not be ordered to pitch their stations at once as it is impossible to tell at this time where they will be most needed. They are usually ordered to hold themselves in readiness off the road at some point from which they can be easily distributed when the need arises. In this order a point will be designated as a station for slightly wounded, usually well behind the zone of fire and at a point towards which the slightly wounded will naturally drift. This station has no regularly organized personnel and one medical officer, one sergeant and seven or eight men will be assigned for this work from some available unit which is not in action. No action is taken by the division surgeon to establish any stations until the news from the firing line shows him that it is necessary.

The Regimental Detachments are normally divided into three battalion sections, each consisting of one medical officer with his orderly, one sergeant and three litter squads. These detachments will follow their battalions into action, unless otherwise ordered and each medical officer will organize a *battalion collecting point for wounded*. They will render all first aid and rapidly as possible transport their patients back to the *regimental aid station* which is in command of the Major with a personnel of one sergeant first class and eight privates. In our present form of warfare the battalion stations are the real first aid stations, as they will in most instances be established right in the trenches with the men. *The regimental aid station* will normally be further to the rear but still as close to the firing line as possible. This station is not in any sense an elaborate one, but should be prepared to give shelter and readjustment of dressings to the wounded as they arrive. At this point they are separated into walking and ambulance cases and when sufficient numbers have been collected the surgeon will notify the division surgeon stating the number and character he has

on hand. *Diagnosis tags should be applied to all men at the time of, and by the man making the dressing.*

When the division surgeon has been informed that sufficient wounded are in the regimental aid stations he will issue an order to the *director of ambulance companies* to establish any number or all of the dressing stations to relieve the congestion on the firing line. When the *commanding officer of an ambulance company* has received his order to establish this station he will move his whole command as close to the front, as the zone of fire will permit. He will then leave his ambulances and wagons with the transportation personnel consisting of one officer, two non-commissioned officers, and twenty privates and will go forward with his dressing station section and bearer section with their equipment on four pack mules to the point designated and establish the station at some sheltered point where there is available fuel and water if possible. It is better if near a road but must at least be available for wheel transportation. When the station has been established the commanding officer will notify the Division Surgeon of the fact, giving the exact location. Scouts are now sent forward to obtain contact with the regimental stations that are to be relieved and all paths and roads leading to the dressing station are marked by red cross guidons. The bearer section of about fifty litter squads now go forward and take up the work of transporting the wounded and in normal war conditions, this work will all fall upon them, as the regimental personnel, will not work behind their own stations, except in times of direct need, and then only by specific order. This station is somewhat more elaborate than the regimental station usually consisting of two tent flies and a small field range upon which sufficient liquid food can be prepared for administration in addition to the surgical dressings. Its organization will usually be a receiving section and a forwarding section and only absolutely emergency surgery and the readjustment of dressing will be attempted at this point. Ambulatory cases will be sent to the rear in squads and always when possible in command of a non-commissioned officer to prevent them straggling over the field.

The division surgeon either upon information that the dressing stations are filling up or in anticipation of the same will order the director of field hospitals to establish one or all of the field hospitals

and will notify the director of ambulance companies of these locations with orders to evacuate the dressing stations as rapidly as possible. When the commanding officer of the ambulance company who is at the dressing station, receives this information he will bring forward his transportation section and send back the wounded at once. The field hospitals are the last stations for medical aid with the service at the front and are always situated well beyond the zone of fire. These are quite elaborate institutions, each having a normal capacity of 216 patients, with facilities for great expansion when required. It is here that patients will receive their first real detailed care, and with its very complete surgical equipment considerable major surgery will be done when necessary. When these become filled with wounded the division surgeon notifies the chief surgeon of the base group of the fact and he will take immediate steps to clear these units of their wounded. The sick and wounded now pass from under the control of the division surgeon and into that of the chief surgeon of the base group.

All of the sanitary units with the service of the front are mobile in every sense, and must be prepared at all times to go forward or back with the troops that they serve. When such a movement occurs wounded men who are in their care at the time, must be left, usually in the care of one or more sanitary soldiers with sufficient dressings and food for their comfort and safety. If the movement is forward these collections of wounded will be picked up by the units of the base group as they follow up the advance, but if the movement is to the rear, the wounded must be abandoned to the enemy.

Although the laws of modern war exempt medical units and personnel from capture, still it is unwise to allow any of these units to fall into the hands of the enemy, as their services to our own forces will be lost for a long time, in fact probably for the duration of the war. The records which have been started by the diagnosis tags, applied in the trenches should be fully completed in the field hospitals so that all claims because of wounds can afterwards be adjusted with justice to the government and to the man. This is a very important duty and no effort should be spared to make it complete and truthful in every respect.

MAPS.

All of the orders mentioned are worded on the assumption that every officer has a map of the country and knows how to read it. The area covered by the divisional operations may be as much as 100 sq. miles so the use of map directions is the only means of insuring anything like accurate dispositions. If at all available, the map used will be the contoured one as made by the War Department, or the Geological Survey, and it is absolutely essential that every officer should be familiar with its construction and meaning.

RESULTS OF EXAMINATIONS FOR THE DIAGNOSIS OF GONORRHEA.

BY LAURA LEONARD GILMAN,
ASSISTANT BACTERIOLOGIST, STATE LABORATORY OF
HYGIENE,
MADISON, WISCONSIN.

One of the routine examinations carried out by the State Laboratory of Hygiene is the examination of pus for gonococci. A review of the work of this type done during the past two years (1915 and 1916) shows that 561 such examinations were made. As the laboratory has no special containers for these specimens, no data sheet is filled out by the physician. The records available are, therefore, exceedingly meager. In fact the name of the physician and the laboratory diagnosis is the only data at hand on over 50% of the specimens. The accompanying figures, however, taken from the total number and from the cases in which the sex of the patient was designated, are of some interest.

	Positive	Negative
	34.4%	65.6%
Total specimens	(193)	(368)
	42.5%	57.5%
Male specimens	(65)	(88)
	27.5%	72.5%
Female specimens	(32)	(84)

It is evident that there is a marked difference in the percentage of positive results in specimens from male and female cases, and that the results in the total specimens (including male, female and undesignated) lie about half way between the two extremes.

It is hoped that during the next biennial period the laboratory will be able to collect more significant and complete figures. This will be entirely possible if the physicians will state the sex of the patient when sending in pus for examination.

THE WISCONSIN MEDICAL JOURNAL

OFFICIAL PUBLICATION OF THE STATE MEDICAL SOCIETY OF WISCONSIN

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Annual Subscription - - - Two Dollars Single Copies - - - Twenty-five Cents

Address all business communications to THE WISCONSIN MEDICAL JOURNAL, 504 Goldsmith Building, Milwaukee

Vol. XVI.

June, 1917

No. 1

EDITORIALS

NEW DANGERS IN INDUSTRY.

THE entrance of the United States into the world war brings many new problems which hitherto have never been presented. We hear much about the new explosives, the new guns, the recent types of water and air craft and the strictly military features are prone to outweigh in our minds all the numerous other features which go to the successful conduct of the modern warfare.

As physicians, our interest has been largely focussed on the management of the wounds and diseases incident to actual battle. We have not given much thought to the new diseases which affect those who are concerned in the much less spectacular but equally as important field of battle—the manufacture of the explosives for the use of the armies.

With every new industry come new diseases. Some of these industrial diseases are of little real danger, others are of grave danger to the workers.

Recently Dr. Alice Hamilton of Chicago has been studying the Industrial Poisons Encountered in the Manufacture of Explosives,* and has presented some most illuminating data. In the manufacture of the modern explosives extensive use is made of nitric acid, cotton, phenol, benzene and toluene. The greatest danger appears to be from the fumes of nitrogen oxide which, as all know, is a deadly poisonous gas. In her list of cases the

greatest number were due to this gas, 995 from nitro-cotton plants, 381 from picric acid, 13 from nitric acid works. Other sources of poison were tri-nitrololuene, benzene, nitrobenzene and toluene, ether, phenol, anilin, fulminate, etc. Certain of these poisons produce rapid death, others produce profound changes in the lungs or internal organs which may cause pneumonia, days after exposure or toxic jaundice and acute nephritis. Tri-nitrololuene seems especially prone to produce symptoms simulating acute yellow atrophy of the liver or intense acute nephritis.

It is not possible to abstract adequately such a report. All should read and study the original article. With the rapid increase in munition plants which even now is happening and the great probability that there will not be at once adequate protection for the workmen, we should familiarize ourselves with the dangers and symptomatology of these violent poisons used in the manufacture of high explosives. As a body of men whose obligation to the public is as great as ours, we should use every ounce of organized effort to insist that proper safeguards be thrown around the men and women who are engaged in these hazardous occupations. The time to act is now before the plants spring up like mushrooms all over the country. It is after all in the small and usually poorly equipped plants that the greatest danger lies. Probably right in your community now is a building where gun-cotton or picric acid, or tri-nitrololuene is being made. Forewarned is forearmed and it is our part to see that healthy conditions,

*Jour. Amer. Med. Assoc., May 19, 1917, page 1445.

as far as it is possible to make them, surround the makers of these necessary but poisonous compounds.

FOOD CONSERVATION.

IN this number is the text of a series of resolutions passed recently by the Marinette-Florence County Society. This opens up the whole question of the manufacture of alcoholic beverages, a subject too great to discuss in a brief space. We doubt if there would have been the popular revolution against liquor had the brewers and distillers not been flagrantly and more or less openly guilty of alliances with all that is low and crooked in politics and vice. They have brought the Nemesis upon themselves and should take their medicine, but instead they are crying about confiscation of property. We wonder they did not reckon with the enormous numbers of lives wrecked or snuffed out which indirectly, yes, even directly, could, with no stretching of the truth, be charged to them.

We have not yet reached the stage of social welfare when human lives are as valuable as property. Property means money. One can sell it for cash or notes and see the figures in the bank book. Human life—well, it does not mean much; there are millions now and more to come. It seems a strange frame of mind which can be smugly satisfied with producing the drink which wrecks homes and lives and out of the profits of the drink generously (?) contribute to charities which take care of the wrecks and help medical science to patch up lives.

Now it takes a good many million bushels of corn, rye and barley to make the liquor. Those millions of bushels of grain could be much better oxidized in human bodies to alcohol and carbon dioxide and water than to be fermented into alcohol and then put into human bodies where the alcohol does harm. The agitation to close the breweries and distilleries is more than war hysteria. There is sound economic principle behind it. The factories need not be closed. Already some are making soft drinks. Others can do likewise or develop some other industries. Thousands of men thrown out of employment sounds distressing but it scarcely agrees with the facts. There is no immigration, labor is scarce, new munition factories will have to be built, land will have to be cultivated and men

will have to join the army. There would appear to be plenty of work if one really wants work.

We agree with the Marinette-Florence Society's resolutions and suggest that it might be a good plan for all the County Societies to pass such resolutions and then to get them before the proper persons.

THE SALVARSAN MONOPOLY.

DO physicians realize that salvarsan can be made in this country for *fifty cents* an ampoule of 6 decigrams but that they have to pay a certain New York firm \$4.50 for it? Think this over? Why is this so, because true it is. Briefly, our lenient and charitable Uncle Sam has so drawn the Patent Laws that the drug salvarsan is given, sealed, and delivered for ever and aye, to all eternity, over to a certain German firm which can do just as it pleases, and has done just as it pleased. There is no more reason for a blanket patent on salvarsan than there is on diphtheria antitoxin. It is an iniquitous, outrageous monopoly which should be broken as quickly as possible not only for the present but for all time to come.

A bill is now before Congress to abrogate the patent. We must get behind it and push. Every individual should write his Congressman, every society should pass resolutions endorsing the bill. As many lay people as possible should write letters. Who pays the bills after all? Is there one of us who has not had some person regret that he could not take salvarsan treatment on account of the expense? This legislation *must* go through and, in the vernacular, it is up to us to see that it does not slumber in some pigeon hole in the files of some Congressman's desk.

**IF YOU CAN'T SERVE YOURSELF,
MAKE YOUR MONEY SERVE—BUY A
LIBERTY BOND.**

CORRESPONDENCE

Philadelphia, Pa., May 21, 1917.

To the Editor of the Wisconsin Medical Journal.

SIR: I have just read with considerable interest the review of the 16th edition of my book on Therapeutics

which you publish in your issue of May, 1917. As this is the 16th edition I have read enough reviews of the book in the past not to feel sensitive about criticisms. Indeed, I have always considered the reviews which really criticize as being of value to me in enabling me to make corrections. May I point out, however, that your reviewer, when he criticizes the number of drugs considered, fails to recognize the fact that when a doctor buys a book which deals with drugs he wants one to which he can refer for information not only as to the drugs that most physicians use, but as to the drugs which other physicians occasionally use, and he often desires information as to how these are used by other doctors. Therefore it is necessary to consider not only the drugs which one uses himself, but drugs which are fairly frequently employed by others.

It is, however, in connection with the criticism of the article on Diabetes that I wish to plead for fair play. The review states "After a little is said about diet and a few words about the Allen treatment, he launches forth into the use of a lot of drugs in diabetes, chiefly opium and its derivatives." Now, as a matter of fact, the article on Diabetes covers six pages. The first two deal with diet as it has been commonly used in the past in the treatment of this disease. Following this, instead of the Allen treatment being covered in a few words, more than two pages are given to it, and, after this, just one page is devoted to the use of drugs, and a page and a quarter to the treatment of diabetic coma.

The reviewer deliberately misrepresents what the pages contain.

Very truly yours,

H. A. HARE.

STANDARD MORBIDITY TABLES.

THEIR SIGNIFICANCE TO PUBLIC HEALTH ADMINISTRATION.

The purpose of a health department is to maintain the population, in so far as possible, in a condition of physical well-being or, what amounts to the same thing, to prevent the occurrence of disease.

Either to maintain the health of the population or to prevent the further occurrence or spread of disease, it is necessary that the places in which cases of disease are occurring and the conditions under which they occur be known and investigated. Not only must the places and conditions where disease is occurring be known, but the times of the year when disease is most prevalent and the sex and age, as well as the occupations, of those most frequently attacked must be known. In localities having satisfactory registration of deaths health officers have in the past been in the habit of studying these things as regards cases of disease which happen to terminate fatally. There has usually been no similar study of the far more numerous cases which terminate in recovery. Study has been limited to the fatal cases because there were usually available what were believed to be fairly dependable data regarding the deaths, while similar

data regarding the nonfatal cases were supposed to be, and usually were, less complete.

For the purposes of the health department the study of fatal cases only has always been recognized to be at best a half-way measure. The health officer and the epidemiologist have studied mortality because of whatever value it possessed as an index of the prevalence of morbidity. While the life insurance company is naturally interested in the frequency of death, the health officer and the sickness insurance company are interested in the frequency of disease. Disease is represented by the cases and is as prevalent as the cases, and nothing short of a study of all cases will ever be satisfactory to the epidemiologist, nor will anything less than a study of all the known cases give to the health department the information it should have in order to attain a reasonable efficiency.

At the present time many municipalities and a number of States are getting reports of a considerable proportion of their cases of certain diseases. The time has come, therefore, when the health departments of these municipalities and States may begin to study intelligently and carefully the actual prevalence and distribution of these diseases in their respective territories.

While realizing that the mortality data represented only the relatively small proportion of cases which by chance were fatal, these data have in the past been carefully analyzed to get all the possible information they would yield of the prevalence of disease. They have been studied by sex distribution, by age distribution, by geographic distribution, by chronological distribution, and by occupational distribution. Wherever reasonably complete data of cases are available, an intelligent health department will study at least as carefully and as minutely the distribution of disease as shown by the occurrence of cases. In fact, the cases would warrant a more extensive study by the health department, for the cases represent the thing being studied and are not merely an index of the prevalence of the thing. Statistically the detailed analysis of cases as a study of disease prevalence and distribution rests upon a much sounder basis than the study of deaths by causes.—*Public Health Reports*, May 25, 1917.

Erysipelas following frostbite.—The death of an insurance solicitor was caused by erysipelas which developed after frostbite. The compensation commissioner of Connecticut found that the injury arose "in the course of and out of his employment," and the court affirmed an award of compensation to his widow. (*Larke v. Insurance Co.*, P. H. R. Aug. 25, 1916, p. 2299.)

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BOOK REVIEWS

MILITARY SURGERY. By Dunlap Pearce Penhallow, S. B., M. D. (Harv.), chief surgeon American Women's War Hospital, Paignton, England; Captain Medical Corps, Massachusetts National Guard; First Lieutenant Medical Reserve Corps, U. S. Army (Inactive List); Director of Unit, American Red Cross European Relief Expedition with introduction by Sir Alfred Keogh, K. C. B., director-general Army Medical Service. Original drawings by the Author. Henry Frowde, Oxford University Press and Hodder & Stoughton, Warwick Square, E. C., London. 1916. Price \$5.00.

This book comes into the reviewer's hands at a time when all considerations of military problems are of utmost interest. American Physicians and Surgeons have been awaiting published reports from the large War Hospitals of England and the Continent in book form and this book on Military Surgery is one of the earliest published. Although the consideration of Surgery, as it occurs on the battle-field and in Base Hospitals, is possibly rather sketchy, still it is exceedingly interesting.

The book is fairly complete. There is an excellent chapter on wound infections and the different methods of treatment by continued irrigation are described. Gun-shot wounds of the soft parts, wounds of bones, the localization and treatment of foreign bodies, wounds of joints—head, neck, trunk, nerves, blood-vessels and a very good chapter on fractures with their treatment gives a fair idea of the subject matter. There is an exceedingly interesting short chapter on shell-shock, gas-poisoning and trench foot, and throughout the book are many points of treatment which are new and descriptions of some wounds and injuries which are so rare in civil practice, that we know scarcely anything of the conditions. Considered as a whole, this book on Military Surgery is of very great interest and of not a little practical importance.

B. B. R.

A TREATISE ON MEDICAL PRACTICE. Based on the principles and therapeutic applications of The Physical Modes and Methods of Treatment (non-medicinal therapy), with explanatory notes concerning the nature and technique of the different physical agents and methods employed, by Otto Juettner, A. M., Sc. M., Ph. D., M. D., author of "Modern Physio-therapy," "Physical Therapeutic Methods," "Daniel Drake and His Followers," Surgeon M. R. C., United States Army, Fellow of the Academy of Medicine of Cincinnati, the American Medical Association, the American Therapeutic Society, the American Academy of Medicine, the American Medical Editors' Association, the Western Association for the Preservation of Medical Records, the "Academy of Medicine of Mexico." A. L. Chatterton Co., Publisher, New York. Price \$5.00.

Dr. Juettner's book is an alphabetical compendium of more or less useful information and misinformation upon a number of unrelated subjects. The doctor admittedly is a therapeutic nihilist and makes light of such other methods of treatment as Christian Science, Free Thought,

etc., which really make use of psychotherapy in the treatment of diseases, but he seems to be oblivious to the fact that many of the electrical applications and mechanical forms of treatment which he describes in his book, are nothing more or less than vehicles or conveyors of suggestion, and, that any cures that might result from the use of these mechanical applications are only the result of psychotherapy.

It makes but little difference whether the patient is cured by his faith in a voluminous Latin prescription of a dozen or more drugs, or by his faith in the omnipotence of a supreme being in whose world all disease is error, therefore, non-existent, or by faith in electrical applications or mechanical systems of treatment whose laws are not only not understood by the patient himself, but not even by the physician. The great fundamental truth at the bottom of all these systems of treatment is that in a great many cases, it is the faith that cures—it makes absolutely no difference what that faith is in. For the specialist in mechano-therapy, this book may be of some interest, but for the up-to-date physician and surgeon, there is practically nothing of value in it.

B. B. R.

PRACTICAL URANALYSES. By B. G. R. Williams, M. D., Director Wabash Valley Research Laboratory, author of "Laboratory Methods," etc. Illustrated. C. V. Mosby Company, Publishers, St. Louis. Price \$1.25.

This little book of 139 pages is a very brief outline of uranalysis, so brief that it seems to the Reviewer to lose any value it might have had. Moreover, to recommend Esbach's solution for quantitative albumen and leave out Tsuchiya's much better method, to give Haine's solution for glucose and leave out Benedict's seem inexcusable omissions. The book is of handy size and might be found useful by students to supplement the more complete works on uranalysis.

CLINICAL AND LABORATORY TECHNIC. By H. L. McNeil, A. B., M. D., Adjunct Professor of Medicine and Instructor in Physical Diagnosis, University of Texas Medical School, Galveston, Texas. Illustrated. C. V. Mosby Company, Publishers. Price \$1.00.

This little manual of 84 pages is a brief outline of what a senior student should have while working as clinical clerk on a hospital ward. It is one of a number of such handbooks, no better, no worse than those we have seen.

It does not seem that it would be of any great value to a practising physician.

PERSONAL HEALTH. By William Brady, M. D., Elmira, N. Y. 12mo of 407 pages. Cloth, \$1.50 net. W. B. Saunders Company, Philadelphia and London. 1916.

Brady's little book on Personal Health is a very amusing and entertaining series of short articles upon questions of personal hygiene and the commoner ailments of mankind. It is full of good, ordinary, common sense advice and is a book which could be read by the public with much benefit.

B. B. R.

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NEXT ANNUAL SESSION, MILWAUKEE, OCTOBER, 1917

The Wisconsin Medical Journal, Official Publication

LIST OF EXECUTIVE OFFICERS OF COUNTY MEDICAL SOCIETIES.

Table with 3 columns: County, President, Secretary. Lists medical society officers for various Wisconsin counties including Ashland, Barron, Brown, Calumet, Chippewa, Clark, Columbia, Crawford, Dane, Dodge, Door, Douglas, Dunn-Pepin, Eau Claire, Fond du Lac, Grant, Green, Green Lake-Washara-Adams, Iowa, Jefferson, Juneau, Kenosha, La Crosse, Lafayette, Langlade, Lincoln, Manitowoc, Marathon, Marinette-Florence, Milwaukee, Monroe, Oconto, Oneida-Forest-Vilas, Outagamie, Ozaukee, Pierce, Portage, Price-Taylor, Racine, Richland, Rock, Rusk, Sauk, Shawano, Sheboygan, St. Croix, Trempealeau-Jackson-Buffalo, Vernon, Walworth, Washington, Waukesha, Waupaca, Winnebago, Wood.

SOCIETY PROCEEDINGS

COLUMBIA COUNTY.

The regular meeting of Columbia County Medical Society was held in the city of Portage on May 2nd, 1917. Meeting was called to order by the president, Dr. Force. Twenty-one physicians were present. Dr. J. E. Simpson of Endeavor was admitted to membership. The principal object of the meeting was Medical Preparedness; but since so little is known as to what steps should be taken in this line, a resolution was passed by all members present, stating their willingness to serve their country either individually or collectively, if our Government asks for such services. This resolution is to be mailed to every member for his signature, and will then be handed to Dr. A. J. Batty, who is chairman of the Auxiliary Committee for Medical Preparedness.

The next step was the adoption of a new fee bill, so very necessary since every commodity has gone up 100% or more. A resolution was also passed which makes the fee for examination of applicants for insurance in fraternal organizations \$2.00.

A. F. SCHEMELING, M. D., *Secretary.*

DANE COUNTY

Dane County Medical Society held a regular meeting on May 8th, at Madison, in the Auditorium of the Madison Library. A revision of the By-laws was discussed at this meeting. Dr. Smiley Blanton, Madison, read a paper on "The Neuroses: Their Relation to the Surgeon and the General Practitioner." Dr. W. F. Lorenz, Mendota, spoke on the "Auxiliary Medical Defense Committee of Dane County."

DUNN-PEPIN COUNTY.

Dunn-Pepin County Medical Society held its monthly meeting at the offices of Dr. A. F. Heising, Menomonie, on May 17th. A very instructive paper, with lantern slide demonstration, was read by Dr. Heising, on "The Examination of the Blood in Various Diseases."

I. V. GRANNIS, M. D., *Secretary.*

GREEN COUNTY

Green County Medical Society held a meeting on May 9, in compliance with the request from the State Council of Defense to organize the county medical forces into an auxiliary force to work with the state and national councils of defense. The Society went on record as being heartily in accord with the movement, and individually and collectively offered their services to the state and government in the interest of the preparedness work. The preparedness committee of the society is composed of Drs. W. B. Gnagi, Monroe, chairman; W. B. Monroe, Monroe; G. H. Darby, Broadhead, and Ed. Blumer, Monticello. The business meeting followed a dinner at the Ludlow.

MARATHON COUNTY

Marathon County Medical Society met on May 4th at the Wausau Club, Wausau. Dinner was served at 6:30, after which Major G. E. Seaman, Chief Surgeon, Wisconsin National Guard, addressed the meeting on "Medical Preparedness and the National Reserve."

MARINETTE-FLORENCE COUNTY

Marinette-Florence County Medical Society met on May 23, 1917, at the Hotel Marinette, with Dr. H. F. Schroeder, the president, in the chair. The minutes of the previous meeting were read and approved without correction. Dr. C. H. Bunting of the University of Wisconsin lectured on "Modern Aspects of Diseases of the Blood." The president extended to Dr. Bunting the sincere thanks of the society.

An informal report from the chairman of the committee on preparedness showed that Marinette-Florence County had up to May 15th contributed ten volunteers to the Medical Reserve Corps.

The following resolutions were presented to the Society:

Whereas, The United States is now at war and confronted by a great crisis, and

Whereas, All possible efforts are being made by Conservation Councils throughout our country to conserve and increase our food production, and

Whereas, Now large quantities of valuable grains are being consumed in the production of distilled and brewed liquors, which yield a minimum of nourishment, and are often used to the detriment of the consumer's efficiency and health,

Resolved, That we, the members of the Marinette-Florence County Medical Society, as physicians, having in mind only a desire to increase our food supply and the efficiency of the unit, the man, deem it wise, prudent and necessary that the use of grains for the production of alcoholic beverages be prohibited for and during the continuation of the state of war.

Resolved, That we implore and urge the President of the United States, the Governor of Wisconsin and our Legislators to use all honorable means in their power to enact laws prohibiting the manufacture of grains into alcoholic beverages, and to enforce such laws inviolate during the continuance of a state of war.

Be It Further Resolved, That a copy of these resolutions be forwarded to the President and to our Senators and Congressmen at Washington and to our Governor, Senator and Assemblyman at Madison.

After discussion and vote the resolution was unanimously carried.

MILWAUKEE COUNTY.

The meeting of March 3rd was called to order at 8:30 P. M., Dr. P. F. Rogers in the chair. Minutes of the last meeting read and approved as read. Motion was made

by Dr. H. Reineking, duly seconded and carried, that under suspension of the by-laws, the secretary be instructed to cast the ballot of the Society for election to membership of Drs. F. B. McMahon, John William Smith, Urban J. Durner, John E. Armitage, U. Senn, E. D. Angell, E. G. Linkman, R. D. Kenney, H. P. Siekert and J. J. Heffron.

Dr. T. L. Harrington demonstrated a case of Flatfoot, illustrating a method of treatment. Miss Agnes Murray read a paper on "The Medical Social Service—The New Ally of Preventive Medicine." Dr. George C. Davis addressed the society on "Surgery in Base Hospitals of the British Expeditionary Force in France." A vote of thanks was tendered Dr. Davis for his interesting address. There were present 150.

DANIEL HOPKINSON, M. D., *Secretary*.

Dinner meeting held jointly with the Wisconsin Surgical Association at the Hotel Wisconsin. After the Dinner the meeting was called to order at 9:00 P. M. The President, Dr. P. F. Rogers, in the chair. The minutes of the last meeting were read and approved as read. Under Suspension of the By-Laws the Secretary was instructed to cast the ballot of the Society for the election to membership of Drs. J. Carrol, John Heraty and M. J. Gallogly. The following resolution presented by Dr. E. Quick was adopted upon motion made by Dr. S. S. Stack duly seconded and carried:

Whereas, An amendment has been reported out of Committee for passage by the Wisconsin Legislature giving an injured employee the right to sue his Surgeon for malpractice after said employee has received compensation from his employer for loss of time and disability; Therefore be it

Resolved, That it is the sense of the Wisconsin Surgical Association and the Medical Society of Milwaukee County, in joint session, that it is not in the interest of justice to permit any injured person to collect a double indemnity for personal injury, and that the passage of this amendment will bring forth a vast number of unmeritorious malpractice claims; and

Further, That this resolution be brought to the attention of the Legislative Committee of these Societies.

Dr. J. F. Pember, Janesville, read a paper on "The Present Status of Gastric and Duodenal Ulcer." Dr. W. Ackermann, Milwaukee, read a paper on "Presurgical Stage of Gastric and Duodenal Ulcers." Discussion by Drs. A. H. Levings, D. W. Harrington, E. H. Monsing, T. W. Nuzum, D. Hopkinson, D. J. Hayes, W. H. Neilson, and P. F. Rogers. There were 130 present.

DANIEL HOPKINSON, *Secretary*.

NINTH COUNCILOR DISTRICT.

The annual meeting of the Ninth Councilor District Medical Society was held at Stevens Point, Wisconsin, Friday, May 18th, 1917. A banquet was served by the local society at the Library building. Covers were laid

for forty-six members. After the cigars were passed, Dr. Donald Waters took the chair.

While waiting for the other business of the evening, Dr. Mason of Marshfield gave some points on Industrial Insurance that were discussed by the Milwaukee Medical Society in regard to the injustice of a bill before the legislators at Madison, Wis. That after a patient has been given attention by the doctor and he has settled with his employer, he can then turn around and sue the doctor for malpractice and would move a committee of three be appointed or the Secretary at once write to all members of the Assembly and Senators of this District to fight such an injustice.

Motion carried. The Chair appointed on that committee: Dr. Frank A. Southwick, Stevens Point; Dr. D. S. Jones, Wausau; Dr. Jackson of Rudolph. Committee reported favorably on this matter.

Next order of business was the election of officers for the year. Moved a committee of three be appointed by the chair to select a President and Secretary and place of meeting for the year. Committee appointed was Dr. W. W. Gregory, Stevens Point; Dr. Ridgman, Grand Rapids; Dr. D. S. Jones, Wausau.

Committee reported favorable to the election of Dr. E. H. Rogers, of Stevens Point, for President. Dr. Joseph F. Smith, of Wausau, was re-elected Secretary and Treasurer. The following schedule of meetings was adopted: Summer meeting, Grand Rapids; Fall meeting, Wausau; January meeting, Marshfield; Spring meeting at Stevens Point.

Dr. E. H. Rogers was called to the chair and thanked the members for the honor they conferred upon him by selecting him for their President for the year. After this the program of the evening was taken up by the society. Paper No. 1, "A Resume of My Obstetrical Cases," by Dr. H. H. Milbee of Marshfield, Wis. Paper No. 2, "Nitrous Oxide in Obstetric Practice," by Dr. J. B. Vedder, Marshfield, Wis. Paper No. 3, "Conditions Underlying Maternal Mortality," by Dr. Dorothy Reed Mendenhall, of Madison, Wis.

Discussion on the papers was opened by Dr. D. S. Jones of Wausau. Discussion was taken up by nearly all members present. Dr. Jackson moved that the Society extend a vote of thanks to those who read papers at the meeting. Carried.

Moved we adjourn, subject to the call of the Secretary, Dr. Joseph F. Smith of Wausau.

J. D. LINDORES, M. D.,

Secretary Portage County Medical Society.

OUTAGAMIE COUNTY.

A meeting and banquet were held at the Hotel Randolph, Appleton, on March 15th, to celebrate the return of Major James Scott and Lieut. W. N. Moore from the Mexican border. The business meeting was devoted to a discussion of the pending health insurance legislation. At the banquet Drs. Scott and Moore gave interesting talks regarding the Medical Department of the U. S. Army.

M. E. RIDEOUT, M. D., *Secretary*.

NEWS ITEMS AND PERSONALS.

DR. GEO. B. NOYES has been appointed local surgeon for the Minneapolis, St. Paul and Sault Ste Marie Railroad at Stone Lake.

DR. OSCAR LOTZ, Milwaukee, has been appointed a member of the Wisconsin State Board of Medical Examiners.

DR. EDWIN C. EBERT, Milwaukee, has been appointed assistant surgeon in the Navy, and has been ordered to report at the Great Lakes Naval Training Station.

DR. W. J. HANLEY, Kenosha, has received a 1st Lieutenant's commission in the Medical Corps, W. N. G. He has been assigned to the Racine Ambulance Company.

DR. E. L. PARMENTER, Mondovi, has received a commission in the Medical Officers' Reserve Corps, ranking as 1st Lieutenant.

DR. J. W. FREW, Milwaukee, has been appointed instructor at Ft. Benjamin Harrison, Ind. Owing to a recent severe illness Dr. Frew has not yet left for his duties.

DRS. HARRY GREENBERG and FRANK DARLING, Milwaukee, have received order to report at Fort Riley, Kansas.

DR. THOMAS WILLET, West Allis, has been ordered to report for duty at Ft. Benjamin Harrison, Ind.

DR. GEORGE C. RUILAND, Milwaukee, has been ordered to report to the Commanding Officer, Central Department, Chicago.

DR. I. E. SCHIEK, Rhinelander, has received a commission as surgeon, Hospital Corps, U. S. Army, and will organize a unit of the Corps in Rhinelander.

DR. G. L. BELLIS, superintendent of Muirdale Sanatorium, Milwaukee County's Tuberculosis Sanatorium, who is a 1st Lieutenant in the Medical Reserve Corps, has been ordered to report at Ft. Benjamin Harrison, Ind., for a course of training. Dr. Harry Cohn, 1st assistant superintendent,

will be in charge of the sanatorium until Dr. Bellis returns.

DR. A. J. PULLEN, senator from the Fond du Lac district, who is a 1st Lieut. in the Medical Reserve Corps, will serve in the Legislature until he is called into active service. The Attorney-General holds that Dr. Pullen's enlistment does not affect his right to serve in the senate.

DR. J. H. VOJE, who has occupied an office at Oconomowoc for thirty years, closed the office on May 1st, and will have office hours at the Sanatorium Waldheim.

In the April issue of the Journal a news item was printed stating that Dr. D. R. Connell, Beloit, had established an institution for the treatment of nervous diseases. This is an error. Dr. Connell is at the Beloit General Hospital, and confines his practice to consultations, office practice and surgery.

DR. D. R. SEARLE has been appointed health commissioner of Superior. He succeeds Dr. C. M. Gould, who resigned several months ago because of ill health.

DR. M. H. FULLER, Bonduel, has disposed of his practice to Dr. J. F. Terlinden of Jackson, Wis., and will go to Baltimore about September 1st to specialize in eye, ear, nose and throat work.

DR. E. C. CARY, Reedsville, who has been ill with pneumonia is convalescent.

DR. J. C. PRILL, Chetek, has recovered from a recent operation.

DR. WILLIAM E. DURR, Milwaukee, who underwent an operation at Milwaukee Hospital on May 15th, is still in a serious condition.

DR. OTHO FIEDLER, Sheboygan, recently underwent an operation for appendicitis.

DR. J. B. NOBLE, Waukesha, who contracted blood poisoning from a glass cut, recently, is much improved.

DR. J. G. HOFFMAN, Hartford, is convalescing from a recent severe illness.

DR. EDWARD EVANS, La Crosse, is convalescent after a severe siege with septic sore throat, followed by multiple neuritis, contracted while doing a tracheotomy on a patient at Galesville, during the epidemic at that place.

The Directors of the Dodgeville General Hospital have closed negotiations for the purchases of the residence of Mrs. D. H. Williams, which, after remodeling, will be opened as a sanatorium.

St. Savior Hospital, Portage, was dedicated on May 17. The institution is under the direction of the Sisters of the Divine Savior. It was built at a cost of \$30,000, and has an equipment of twenty-eight beds. Work on the building was started last October.

St. Joseph's Hospital, Marshfield, plans a \$200,000 addition this summer.

Dr. G. A. Larson, Hayward, plans establishing a hospital in that city this summer.

The Walworth County Board of Supervisors has appropriated \$19,000 for the erection of a hospital at the county farm.

The erection of a general hospital, with a capacity of not less than 500 beds, for Milwaukee, was recommended to the joint council and county board committee by a committee of city and county medical officials. The committee urged that the institution be under county control, and that the present Emergency Hospital be sold to help raise the necessary funds.

Forty-nine Madison physicians have signed a petition to the council asking that body to appropriate funds for the erection of a new contagious disease hospital.

The \$45,000 fund for equipping Ambulance Company No. 1, Milwaukee, has been raised.

A tuberculosis sanatorium for Ashland, Bayfield and Iron Counties is planned by medical men and the county supervisors of these counties. The institution would be maintained jointly by these counties.

The Rockefeller Foundation announces that Dr. Livingston Farrand president of the University of Colorado, has been granted a year's leave of absence to undertake a campaign against tuberculosis in France, under the auspices of the national health board of the Foundation.

The recent epidemic of septic sore throat at Galesville cost that city \$3,300 for nursing services. The county board has made an appropriation of \$1,300 to help pay the bill, and a movement is on foot to introduce a bill into the Legislature asking the State to pay the entire bill.

Thirty deaths from meningitis, out of a total of seventy cases, in the past six months are reported at the Great Lakes Naval Training Station. Out of 8,000 men at the Station, 400 are suffering from measles, mumps, scarlet fever and other ailments.

Theda Clark Hospital, Neenah, has received the sum of \$1,058.02 from the First Presbyterian Church, for the endowment of a child's bed at the hospital.

St. Elizabeth's Hospital, Appleton, has been forced to raise its rates, and after June 1st an increase of \$2 per week for wards and rooms, will be charged.

According to figures in the office of the State Council of Defense, Wisconsin must furnish 700 physicians for its quota under the selective conscription act. There are in the state 2,500 licensed physicians. The State Medical Society, after an investigation, reports that 550 doctors are either in some branch of the service now, or are ready to go when called upon.

Because of the growing demands during the development of war preparedness on the time and interests of Milwaukee business and medical men, it was voted on May 30, by the promoters of the Preparedness and Baby week show, July 2-7, to discontinue the project.

The new state law relating to the employment of public health nurses, empowers towns, villages and cities, through their proper officials, to employ public health nurses jointly, the salary and other expenses to be paid jointly, according to population.

THE WISCONSIN COMMITTEE OF NATIONAL DEFENSE MEDICAL SECTION.

The state Committees of the respective states that have hitherto been co-operating with the Council of National Defense as the State Committees of the Committee of American Physicians for Medical Preparedness, have been reorganized by the General Medical Board of the Council for Defense. The name has been changed to "State Committee of National Defense—Medical Section." The new Committee includes the old Committee for Medical Preparedness with several additions. County Committees will be continued as "The Auxillary Medical Defense Committee of _____ County" and will add to their membership the medical member of the Governor's County Council of Defense. The new State Committee of National Defense for Wisconsin as appointed by the Council of National Defense is made up as follows:

Edward Evans, La Crosse, Chairman.
 J. S. Evans, Madison, vice Chairman.
 Rock Sleyster, Waupun, Secretary.
 G. V. I. Brown, Milwaukee, Examiner.
 E. J. Barrett, Sheboygan, Examiner.
 Hoyt E. Dearholt, Milwaukee.
 F. Gregory Connell, Oshkosh.
 J. M. Dodd, Ashland.
 C. A. Harper, Madison.
 R. H. Jackson, Madison.
 J. R. McDill, Milwaukee.
 W. T. Sarles, Sparta.
 J. L. Yates, Milwaukee.
 L. F. Jermain, Milwaukee.
 C. R. Bardeen, Madison.
 G. E. Seaman, Milwaukee.
 G. A. Harlow, Milwaukee.
 C. H. Stoddard, Milwaukee.
 J. W. Frew, Milwaukee.
 C. E. Banks, Milwaukee.

MARQUETTE NEWS NOTES.

The Carrell-Dakin method of treating infected wounds was demonstrated at the medical school on May 8.

The Bulletin of the Medical School is just off the press and ready for distribution.

Drs. H. C. Traey and Ivan E. Wallin of the department of Anatomy will remain in Milwaukee during the summer and work on research problems.

The total number of visits made to the Marquette Dispensary Clinic during the past year, from October, 1916, to April, 1917, was 9,363. In the month of April 1,368 visits were made. The

greatest number of these were made by Eye, Ear, Nose, and Throat patients. These numbered 567. The Laboratory and Wassermann tests numbered 37.

A class of Red Cross nurses visited the Marquette Dispensary Clinic during the past month to study methods of treatment. Three out of this class are giving two half days per week at the dispensary as field work in connection with their course.

Rev. C. J. Moulinier, regent of the Marquette Medical School, has given a course on Nursing Ethics to the nurses of St. Joseph's Hospital.

Dr. Van De Erve, assistant Dean of the Marquette Medical School, gave a talk to the Third Ward School, Friday, May 12, on "Clean-up Campaigns" in schools.

Eleven seniors at the Marquette Medical School will receive the degree Doctor of Medicine on the 19th of June. They are:

John D. Gillis, Harry Heiden, Leo A. Hoffman, Timothy J. Howard, Benno F. Koch, Otis W. Maereklein, Charles D. Martin, Edmund W. Scholter, Lyman E. Dockery, Edward R. Ryan, and Gerald Sullivan. The last three have gone to the Great Lakes Training Camp and will receive their diplomas after finishing their work in the Naval Medical School.

Dr. F. A. MeJunkin, Professor of Pathology and Baeteriology at the Marquette Medical School, has an article entitled, "The Effect of Alcohol on the Human Liver," in the May issue of the "Archives of Internal Medicine."

Drs. C. Farmer and F. A. MeJunkin will spend the summer in laboratories at Harvard University.

MARRIAGES

Dr. H. C. Wiger, Dallas and Miss Agnes Jacobson, on May 24, 1917.

Dr. Edward Zwiaker and Miss Erma Meisser, both of Baraboo on May 9, 1917.

Dr. William Hulburt Banks, Hudson and Miss Bessie Gibson, Windom, Minn., April 30.

REMOVALS

- Dr. J. C. DeWane, Boyceville to Osette, Mont.
 Dr. D. J. Ryan, Rice Lake to Neenah.
 Dr. F. W. Pfisterer, Milwaukee to Markesan.
 Dr. B. F. Howery, Black Earth to Chicago.
 Dr. M. E. Rideout, Appleton to Hortonville.
 Dr. G. H. Lawrence, Galesville to Fond du Lac.
 Dr. C. M. Gould, Superior to River Falls.
 Dr. J. C. Palmer, Friendship has established an

office at Adams, and will practice there a part of each week.

Dr. A. J. Loughnan, until recently house physician at Waldheim Sanatorium, Oconomowoc, will occupy the office and residence recently vacated by Dr. J. H. Voje.

**IF YOU CAN'T SERVE YOURSELF,
 MAKE YOUR MONEY SERVE—BUY A
 LIBERTY BOND.**

DEPARTMENT OF NURSING

Conducted by Miss Stella Fuller, 566 Van Buren St., Milwaukee, Wis. Please address items of news and articles for this department to the editor of the department.

THE RED CROSS NURSING SERVICE.

garbed in the romantic uniform and placed in the heroic situation pictured by our magazine writers and illustrators has become firmly fixed. When they are told the requirements that are demanded

There is one branch of the American Red Cross that, while it is probably most widely known, is also most widely misunderstood, and that is the Nursing Service. "I want to enlist as a Red Cross Nurse. Please tell me when I can begin." That has been the appeal of hundreds of young women

*This is one of a series of papers on Red Cross Work by Mrs. J. Cary James, Chairman of Committee for Instruction of Women. These papers will be issued in bulletin form, and distributed throughout the state.

in whose minds the alluring image of themselves by the heads of the service, and discover that they are not likely to have the distinction of rescuing desperately injured men under terrific fire, they look hurt and aggrieved, evidently considering that the whole duty of a Red Cross Nurse is to get into a becoming uniform and engage in one or two spectacular exploits. It is well though, not to be too hard on them, as often they earnestly desire to be of use and it is more through ignorance of nursing conditions generally, and the Red Cross in particular, that they are inspired to make, what seems to those who know, a ridiculous request. And this is not the worst of it! Many people believe that anyone can be a Red Cross Nurse merely by stating she wants to be, and that the Red Cross accepts anyone applying for enrollment.

As the Red Cross is an arm of the government, it is no more to be expected that untrained, inefficient persons will be called upon to serve than that the army and navy would take recruits without thinking of training them. Someone should make a vigorous attempt to get into the public mind the fact that the Red Cross standard of nursing is so strict, that practically only the very highest type of women, both mentally and morally, and of unquestioned repute in their profession, are enrolled in the Red Cross.

(1) They are required to be trained in, and graduated from, an accredited hospital maintaining fifty beds a day.

(2) They must have taken the examination given by the State Board of the National Association of Nurses, in order to be registered in the State.

(3) They must belong to some organization which is affiliated with the National Association, and they must be between the ages of 25 and 40.

(4) Their fundamental qualities must be of the highest order, and the ideals of their profession, as interpreted by their two leaders, Miss Delano and Miss Noyes, the directors of the Red Cross Nursing Service, are almost religiously maintained.

The mental attitude of most of the enrolled nurses is one which, alas, is far from common among women generally in that they do, to the uttermost, give themselves in an admirable spirit of duty, devotion, and service to their cause. For the Red Cross is a cause and it has the greatest

mission that can be given to human beings to fulfill. The hardest part of it is done by the quiet, unfaltering determination that takes these women, not only into the exciting areas of battle and calamity, but to lonely and primitive regions where the struggle against ignorance, disease, and death is waged almost alone by the nurse assigned to the district to be covered. Almost anyone can rise to heroic heights on occasions, but the steady dull routine of regular duty, which a rural nurse is obliged to pursue, must take, at least, a superior quality of inspiration.

In the training of the women, who hope to be of service to their country as aids to the enrolled nurses, the same standard is applied and the enrolled nurses who act as instructors, all try to impart to their pupils some of the enthusiasm and respect for personal service and conscientious work which animates them. The Red Cross is the only source of supply for the army and navy hospitals and the only volunteer aid their authorities will accept must come from the women who have taken the Red Cross training. The organization of many of these classes throughout the State has resulted in much confusion at times, which might easily have been avoided had the committees in charge known just where and how to get the right information.

(1) The directors insist that the nurse in charge of classes must be an enrolled Red Cross Nurse.

(2) If not enrolled, she must send an application blank to one of the Red Cross Nursing Committees in her State to be passed upon, and if she is approved by them, her application is accepted by the Washington Bureau. These committees in Wisconsin are located in Milwaukee, Miss Regine White of the Emergency Hospital, Chairman; Oshkosh, Miss Handschin, Chairman; Madison, Miss Eleanor Regan, Chairman.

(3) Any trained nurse, desiring to enroll, is referred to them.

(4) A chairman of instruction of women should send to one of the local committees for approval of any instructor selected by her, and should mention, when writing to Washington for appointment, that the instructor is endorsed by such a committee.

(5) No instructor should begin classes, until she has received authorization through committee applying for her appointment.

(6) On receipt of a class-roll bearing instructor's name an official card is issued to her by Miss Noyes.

If these few regulations were more carefully observed, there would be no delay and consequent loss of interest and patience on the part of the women who are eager to begin their course. This training now may be of inestimable service to the State and the public, and as such should be untiringly advocated. Also the individual benefit accruing should make it distinctively worth while.

NEWS ITEMS AND PERSONALS

A theatre party was given by the Milwaukee County Nurses' Association at the Davidson Theatre on May 28th. It was a complete success in every way. The nurses cleared about \$800.

Miss Eleanore Zuppan, formerly superintendent of the Luther Hospital, is teaching Red Cross classes in La Crosse.

Sister Emma Lereh, superintendent of nurses at the Milwaukee Hospital, is taking a month's rest in the country.

Dr. C. A. Evans, Director, and Dr. H. V. Ogden, Chief of the Medical Staff of the Milwaukee Base Hospital, addressed the nursing personnel at the Nurses' Club House, Thursday, June 6th.

Several changes have been made in the heads of nurses' training schools and other departments of Milwaukee hospitals. Miss M. E. Casey, superintendent of nurses of Trinity Hospital, Miss Martha Johnson, Superintendent at Muirdale Sanatorium, Miss Gertrude Iserman, of the Maternity Hospital, Miss Mary Good, Superintendent of Nurses, Miss Cora Nifer, Assistant Superintendent of the Milwaukee County Hospital, Miss Ruth Wiltse, Night Supervisor, and Edith Shoemaker, Social Service Worker of the Milwaukee Infants' Home and Hospital, and Miss Gertrude Knowlton are planning to take up work in other positions.

Miss Anna Rasumssen, who has been doing school work in Grand Rapids, Wisconsin, has taken the position of social worker at the Milwaukee Infants' Home and Hospital.

Miss Constance Hayes, superintendent of Willowbrook Sanatorium at Kenosha, has been given a year's leave of absence. Dr. G. Windesheim, attending physician, will be the acting superintendent, and Miss Ellida Dunker will be his assistant during Miss Hayes' absence.

Miss Gertrude Peterson has accepted a permanent position as visiting nurse in Rhineland, Wisconsin. Her

work is under the Visiting Nurses' Association, but is partly financed by Oneida County, in order that Miss Peterson may give a course of instruction in the county teachers' Training School.

Miss Selma Akerfelt of Boston is doing intensive Baby Welfare Work in Wausau.

Miss Ruth Blakeidge, who has recently finished the course in Public Health Nursing given by Miss Olmsted of the Wisconsin Anti-Tuberculosis Association has accepted a position in Fort Atkinson.

Miss Jeanette Worden, formerly school nurse in Rhineland, has taken a position for the summer at the Sunny Rest Sanatorium in Racine.

The summer course of training for public health nurses given under the Wisconsin Anti-Tuberculosis Association will open June 18th and continue for six weeks. It is designed for nurses already in the field, nurses whose every day experience has brought them face to face with many puzzling problems, and who feel the need of post-graduate work. This need is intensified for all of us by the fact that our country is at war, and that war will inevitably mean new problems to be solved, and new conditions to be met in American homes and in American industry, as well as of the battle front. Fifteen graduate nurses have already registered for this course. These nurses come from Wisconsin, South Dakota, Kansas, Iowa, Montana, North Dakota, Minnesota, and Michigan.

Miss Margaret Siegfried, and Miss Mary Devine of Milwaukee, and Miss Dorothy Erdman of Oshkosh, are members of the Red Cross Emergency Detachment, and are to sail with the Army Base Hospital for France about June 5th.

The Milwaukee County Nurses' Alumnae Association gave their annual banquet at the Nurses' Club on May 23d.

The Columbia Hospital Alumnae held their regular meeting at the Club House on June 5th.

The Red Cross classes which have been held at the Club since March first have been discontinued. The equipment is being used for the same purpose at the University Extension Building.

The Annual Meeting of the Milwaukee County Nurses' Association will be held Tuesday, June 12 at the Nurses' Club.

BOOK REVIEWS

THE NEW METHOD IN DIABETES. The practical treatment of diabetes as conducted at the Battle Creek Sanitarium, adapted to home use, based upon the treatment of more than eleven hundred cases by J. H. Kellogg, M. D., LL. D., chief medical director of the Battle Creek Sanitarium, author of "Nervasthenia—its causes and Cure," "Colon Hygiene," "Rational Hydrotherapy," "The

Art of Massage," "Light Therapeutics," "The Hygiene of Infancy," etc. Good Health Publishing Co., Battle Creek, Michigan, 1917. Price, \$2.50.

In this small volume hastily written by Dr. Kellogg is found a very good popular exposition of diabetes. Some chapters are more worthy of note than others. That on "General Health Rules" is quite to the point and should help the patient into whose hands the book is supposed to be placed. Dr. Kellogg brings in his hobby incompetent ileo-cecal valve as a cause of diabetes. This is certainly stretching a point.

However, we feel that the general plan and contents of the book are good and that one would do no harm in giving this book to the diabetic patient. One useful feature is the chapter which lists many apparently palatable receipts for the preparation of the diabetic's food.

BOTANIC DRUGS, THEIR MATERIA MEDICA, PHARMACOLOGY AND THERAPEUTICS. By Thomas S. Blair, M. D., fellow American Medical Association; Fellow Harrisburg Academy of Medicine; Editor "The Medical Council;" Author of "Public Hygiene," "A Practitioner's Handbook of Materia Medica and Therapeutics," and "Pocket Therapeutics;" formerly neurologist to Harrisburg, (Pa.) Hospital, etc., etc. The Therapeutic Digest Publishing Co., Cincinnati, Ohio, 1917. Price, \$2.00.

Just now when prices on many synthetic drugs have become almost prohibitive, this small book upon botanic remedies is timely. It is a plea for the extension of knowledge and use of many of our common field plants. It is not well understood that there is a wealth of plants growing by our roadsides which can be and have been used medicinally.

During the later years physicians have come to use more and more synthetic preparations and active principles almost to the exclusion of many valuable Galenic preparations. The pharmacology and therapeutics of many almost unknown remedial plants are briefly considered such as *Alnus*, *Ailanthus*, *Aletris*, *Calendula*, *Catha edulis*, *Crataegus*, *Epigaea*, *Enonymus*, *Kalmia*, etc. There is quite a wealth of interesting botanical information.

B. B. R.

THE NEWER METHODS OF BLOOD AND URINE CHEMISTRY. By R. B. H. Cradwohl, M. D., Director of the Pasteur Institute of St. Louis and the Cradwohl Biological Laboratories, St. Louis and A. J. Blaivas, assistant in the same; sometime technician in pathological chemical laboratories. New York Post-graduate Medical School and Hospital; and former assistant, chemical laboratory, St. Luke's Hospital. New York City. With sixty-five illustrations and four color plates. C. V. Mosby Company, Publishers, St. Louis, Mo. 1917.

The authors have collected into a convenient volume all the newer methods which are now so essential to the study of cases in the clinic. A number of colored plates show various tests and color scales.

The text is clear, the methods are ones tried and proved reliable. The book is an excellent reference volume in clinical work.

The Wisconsin Medical Journal

Volume XVI

MILWAUKEE, JULY, 1917

Number 2

ORIGINAL ARTICLES

PNEUMONIA IN CHILDREN.*

BY A. W. MYERS, M. D.,

MILWAUKEE.

In looking over the records of the pneumonia cases treated at the Children's Hospital of Milwaukee during the past four and a half years I have been struck by the difficulty of making a satisfactory classification of the cases occurring in young children.

It is at this age, and one may say at this age only, that catarrhal pneumonia is seen as a primary disease. And the teaching of most of the text books on children's diseases is that during the first two years of life most of the pneumonias met with are of this character, rather than of the croupous type seen so commonly in older children and in adults.

But every-day clinical experience, in this part of the country at least, does not bear out this view, if one considers as croupous pneumonia those cases of sudden onset, persistently high temperature, fairly definite course, and termination usually by crisis, with, in most cases, prompt clearing up of the lung involvement.

When one views the whole picture of the disease, rather than the physical signs alone, the impression is gained that even in young children croupous pneumonia is a fairly common disease with a low mortality rate, while catarrhal pneumonia is fortunately much less frequent for its mortality is enormously higher.

This view is borne out by the figures derived from the study of 69 cases treated at the Children's Hospital. Of these 69 cases, five were moribund when admitted, dying either on the day of admission or on the following day, and these have been omitted from the calculations. Of the remaining

64 cases of pneumonia in children under ten years of age, 47 were apparently croupous pneumonia, while 17 were of the catarrhal type.

Among the 47 croupous pneumonias there were two deaths, a mortality rate of about 4%, while among the 17 cases of catarrhal pneumonia there were 6 deaths, a rate of about 35%.

Looking more particularly at the cases in the first two years of life, we find 20 cases of croupous pneumonia with 2 deaths, a rate of 10%, and 12 cases of catarrhal pneumonia with 6 deaths, a rate of 50%.

These figures are so similar to those recorded by some other observers and are so fully confirmed by experience that I believe them to be fairly representative.

The reasons for this vast difference are not hard to find. Catarrhal pneumonia is primarily a peribronchitis with involvement of the adjacent lung tissue by direct extension of the inflammatory process. In the young child there is a larger amount of interstitial tissue in the lung and poorer development of the elastic fibers than at any later period, so that the material for the development of a peribronchitis is abundantly present. In addition, the minute size of the air passages and the alveoli, only one-third that of the adult, favors their occlusion by the products of inflammation. This not only interferes with the oxygenation of the blood but also adds mechanically to the work of the right side of the heart in carrying on the pulmonary circulation. Thus we have a severe febrile disease without any special tendency to self-limitation, with severe strain thrown upon the right side of the heart and upon the respiratory muscles, occurring at a time of life when they are poorly prepared to meet such an emergency.

In croupous pneumonia on the other hand the mechanical interference with proper oxygenation of the blood is very rarely dangerous and even when a migratory type of the disease shows itself and one lobe after another becomes consolidated, the first lobe or lobes to be involved will usually clear up sufficiently to carry on adequate oxygenation before

*Read at the 70th Annual Meeting of the State Medical Society of Wisconsin, Oct. 4-6, 1916.

the process has extended to a dangerous extent. When death occurs in croupous pneumonia as a result of cardiac failure it is much more apt to have the appearance of being due to the toxemia rather than to the mechanical obstruction. And that the toxemia is well borne by children the statistics would seem to prove.

On account of the general familiarity with the subject and the time limit set by the program no attempt will be made to discuss in full the diagnosis or the treatment of pneumonia. Only a few features will be considered which are especially characteristic of pneumonia in children, particularly croupous pneumonia.

The making of a diagnosis of pneumonia in a child may be very easy or it may be very hard. When the physical signs are present from the beginning no difficulty whatever may be experienced. Although in this connection a word of warning may not be amiss in regard to areas of apparent dullness which may be caused by the position of the child. In babies particularly the flexibility of the spinal column permits an unusual amount of compression of one side of the thoracic cavity and expansion of the opposite side when the child is held unevenly. This compression of one side and expansion of the other causes a very perceptible change in the percussion note, and an apparent diminution in the breath sounds on the compressed side which may be misleading unless both sides are examined while the child is held in an erect position.

But a more frequent source of difficulty in making a positive diagnosis of croupous pneumonia is that the physical signs may be greatly delayed in making their appearance. In children, for some reason not yet known, the fibrinous exudate may not be poured out until late in the course of the illness and under these circumstances there may be no impairment of resonance over the affected area until the process has lasted several days, sometimes not until the crisis is nearly reached.

In addition to this absence of percussion findings the auscultatory evidence may be misleading. Rales are not heard in a great many cases or, if present, may be so for a short time only. Bronchial voice and breath sounds are frequently late in making their appearance. An interesting light has been thrown upon this feature by X-ray studies in recent years. Roentgenograms of croupous pneumonia in children show that at first the pro-

cess begins as a cone-shaped area with the broad end in contact with the pleura, while the apex of the cone extends toward the root of the lung. When the consolidation has extended all the way to the root of the lung so that there is an area of uniform density from the pleural surface to the bronchus the bronchial voice and breath sounds are always heard. But during the process of development, before the apex of the cone of consolidation has reached the root of the lung, the sounds have to be conducted through layers of air and tissue of different densities and the bronchial character of the breath and voice sounds may be diminished or lost entirely.

The breath sounds over the involved area of lung are often diminished in the early stages, before the bronchial character of the breath sounds has developed, but with the very shallow respirations of the young baby this sometimes becomes too fine a distinction for the average ear to recognize.

When the physical signs are absent or imperfectly developed a positive diagnosis may not be possible for a few days, but even in those cases the character of the temperature and of the respirations will usually enable one to make a provisional diagnosis at a fairly early period, provided care is taken to exclude the possibility of ear, genitourinary tract, and alimentary tract disturbances.

The temperature usually maintains a continuously high level throughout the twenty-four hours in which cases the physical signs are wanting just as in the typical cases. And the usual methods of reducing the temperature—emptying of the bowels, withholding or diluting of food, sponging, bathing, packs, etc., produce the same unsatisfactory results as are seen in the frank cases.

The character of the respirations is one of the most important helps to diagnosis in these obscure cases and sometimes it will give the only definite information to be had aside from the temperature. The characteristic features of the respiration in croupous pneumonia are the rapid but not labored breathing, the short inspiration followed by a pause, and the grunting or moaning expiration.

The change in the rhythm of respiration from the normal type with the pause at the end of expiration, to the form usually seen with the short inspiration followed by the pause, has been discussed at considerable length and the suggestion that it is due to a toxic action on the respiratory center has received considerable support. To my

mind both the change of rhythm and the expiratory grunt have seemed more probably the result of the plenisy which is practically always present in croupous pneumonia. At any rate in many cases they are not seen constantly and they are particularly apt to disappear when the child is very quiet and the breathing is shallow, as when the child is asleep.

The evidence of pleural pain is often seen even at an early stage in the preference for lying in some one position and in manifestations of pain on motion or handling. And these symptoms may precede by several days any pleural friction sounds over the area of involvement.

The plenisy leads also to the crying after coughing and the attempts to suppress the cough which are so commonly seen in croupous pneumonia. But it must not be forgotten that the cough is a much less conspicuous feature in croupous pneumonia than it is in catarrhal pneumonia. In some cases it is almost entirely absent.

From what has been said it is evident that a provisional diagnosis of pneumonia must sometimes be made on slender grounds in young children, but if reasonable care is taken to exclude other sources of disturbance, a diagnosis based upon the character of the temperature and of the respirations will be justified in the great majority of cases and will usually be confirmed within a few days by the development of unmistakable signs of consolidation.

In considering the treatment of croupous pneumonia in children it is well to remember its natural tendency to show a lower mortality rate and a milder course than in the adult and thus to try to avoid *over-treatment*.

When one considers the rapidity of respiration seen in young children with pneumonia and realizes the amount of work required of the respiratory muscles in keeping up that pace for five, six, or seven days, or even longer, one must feel a desire to make the clothing about the chest and abdomen as loose and light as possible. To my mind a loose-fitting woolen shirt is a much more suitable and comfortable garment than any form of pneumonia jacket ever devised.

In young children and particularly in babies the diaphragm is the chief muscle of respiration and in pneumonia it is especially necessary to avoid any interference with its free action. The two greatest causes of interference with this freedom are tight abdominal binders and distention of the stomach

and bowels with gas. Much restlessness, distress, and sleeplessness may be avoided by bearing these simple ideas in mind. It is easy to loosen the binder but less easy to relieve the abdominal distention. However, castor oil at the beginning, cutting down the food to the simplest forms and smallest quantities, and lengthening the intervals between the feedings, with daily enemas if needed, will usually control this source of discomfort. Careful attention given to the food and the avoidance of too frequent feeding will result in lessening the general toxemia as well as the distention, for in many cases there is, especially at the beginning of the attack, an almost complete arrest of digestive activity. A failure to take this into account cannot fail to exert an unfavorable influence on the situation.

Probably the greatest single step forward in the treatment of pneumonia which has been taken in the past decade is the general adoption of the "fresh air" method. There is still considerable argument as to how the fresh air produces its good effects, but there is very general agreement that the good effects are produced. In this climate the question of the coldness of the air often comes up for discussion. It seems to be the general opinion that there is a small percentage of cases of pneumonia in which very cold fresh air is not as well tolerated as fresh air which has been tempered a little. The fresh flowing air is necessary in every case, the only question is as to its temperature. In those cases in which there appears to be an element of bronchial or laryngeal spasm the warmer fresh air is sometimes better borne than the excessively cold air of a Wisconsin winter. But these cases are distinctly the exception and in the great majority of cases the coldness of the air can be entirely disregarded, although it goes without saying that the children must be kept warm from head to foot while they are breathing the air of a winter's day.

The action of the heart and the state of the nervous system are better guides to the need for antipyretic measures than any fixed rule as to height of the temperature. In an old-fashioned paper of this kind, whose chief object is to promote discussion, I am going to express my personal fondness for the warm pack as an effective measure, especially well borne by children, and for moderation even in its use. Whatever measures are adopted care should be exercised not to exhaust the child by too frequently repeated handling, for a child sick

with pneumonia may have a hard time getting rest, though he needs it very keenly.

When one comes to the question of medication in croupous pneumonia in children it is well to remind oneself often of Mr. Punch's celebrated advice to the young men to get married—"Don't."

It seems to me that the best results are obtained by looking upon the process as an intoxication rather than a localized inflammatory disease of the lungs. In addition to the general measures which have already been considered an abundance of water to drink, sodium bicarbonate internally, and occasionally digitalis, are the only things I wish to mention. Possibly any alkali would do the work of the sodium bicarbonate but I have never found one which seemed more satisfactory.

I do not imagine that the soda has the slightest effect upon the duration of the disease, but it does seem to lessen the toxemia in many cases and thus to enable the child to pass through the period of illness with the minimum amount of discomfort and perhaps one may even say of danger. My own impression is that when sodium bicarbonate is used freely the need for the treatment of special symptoms is greatly reduced. Perhaps for this reason digitalis seems to be required only rarely.

Persistent or painful cough may call for a few doses of opium in some form, but it has always seemed to me better to administer it separately and only when it is needed to secure sleep, and not to give it in a mixture which is to be taken throughout the whole twenty-four hours.

But in croupous pneumonia we must always remember the natural tendency of the disease to spontaneous recovery. By so doing we shall not be carried away by enthusiasm over our own therapeutic results but instead we shall learn to listen gladly to the experiences of our brother practitioners who may be arriving at the same goal by a totally different path.

DISCUSSION.

DR. T. J. REDELINGS, Marinette: Mr. President, Members of the Society, Ladies and Gentlemen: Dr. Myers has requested me to participate in this discussion. There is no valid reason, however, why I should aspire to discuss his paper. I am not a pediatrician, and I shall find it difficult to endeavor to think of pneumonia in an infant as apart from pneumonia as I see the picture in general.

However, if we may think of the infant or the child as a little man or little woman, perhaps our reasoning

in relation to infant diseases is not entirely different from that as it applies to the adult.

I wish to compliment the doctor upon the excellent manner in which he has covered the subject, in so far as his paper attempted to do so.

Precedent seems to justify us in perpetuating the use of the term pneumonia. I do not know what it may mean to the average man or the average physician, but to my mind it conveys a very indefinite meaning; and as I have been following the literature and studying my patients in recent times, it has seemed to me that the term pneumonia conveys no criterion as to what happens to be the affliction of the case to which it is applied. We qualify the term pneumonia as catarrhal or bronchial pneumonia or lobar pneumonia, when the facts are that pneumonic infections, as our conception presupposes at the present time, are really bacteriemias which may be dependent upon entirely different organisms for their causative factor. And until we can devise some simple method for readily determining the type of the infection, our designation of the term is in the nature of a blanket expression.

A pneumonia may be a pneumococemia, it may be a streptococemia, it may be due to a Friedlander, or perhaps to micrococcus catarrhalis, or perhaps one of the types of the staphylococcus group.

In aspiring to the ideal, if the edict is correct that our first duty is to discover the cause of disease, and then to remove it, our efforts in the treatment of pneumonia are likely to be productive of harm unless we are forewarned or forearmed of the knowledge of the specific cause in the particular case, and have some agent with which to combat that cause.

In a general way I think I may say that the physical signs of this type of inflammation in the infant lung are not always easily demonstrable, and they are not always outlined in proportion to the severity of the clinical picture. It seems to me that the two important factors to guide one are temperature and respiration. Someone has said that a diagnosis of intuition is a short course to a wrong conclusion. I am perfectly willing to subscribe to that sentiment, but I am possessed with a profound conviction that if there is any place in the sick room where intuition and intuitional judgment which is based upon, we will say, a reasonable training and some experience, is more valuable than in the sick room of a case of inflammation of the lungs in an infant no matter what its cause.

I wish to compliment the doctor on the very diplomatic manner in which he handled the discussion of the treatment of pneumonia. I am not a nihilist in the practice of medicine. I have had some experience in something more than three decades devoted in an honest effort to relieve suffering in the sick room, and my conclusion at the present time is that I am disarmed in the presence of my pneumonia patient; and if I were to add anything to the doctor's suggestion, I would like to ask him to remove his restraint with reference to the use of opium. I think the first duty that we owe the pneumonic patient is to give him all the comfort which it is within our power to give him without doing harm. It has been my

practice for some years to separate my anodyne from such other agents as I might bring to bear. The antipyretics I discarded some years ago. I am not convinced that my absolute discontinuance of their use was a wise procedure. Pneumonia, particularly the lobar type, is a disease in which there is a distinct crisis, which is self-limited, and it is possible that an occasional small dose of an antipyretic may not be as harmful as is sometimes suggested, and certainly is not that unless there is evidence that it is injuring the circulation.

If there is any other admonition that I would like to make with reference to the treatment, that is, the medication, it would be to observe closely the heart's action. The lagging heart I think should be sustained.

I have tried the use of cold and the use of heat as a factor in the treatment of pneumonia, and I have been unable to choose between them, so far as results are concerned. Comfort to the patient I think is greater under the use of warm applications than cold.

My service is almost entirely to the family, so that I have had very little opportunity to try the outdoor treatment. I do, however, agree with Mr. Myers, that fresh air, especially fresh air that has been moderated on a cold day, is very desirable for the pneumonic patient.

There is one other thing which I think I may be justified in leaving with you, and that is also to supplement what the doctor has already said; perhaps I may feel at liberty to put it a little stronger than the doctor has suggested in his paper; and that is the examination and re-examination of your pneumonia patient. It is my contention that the diagnosis once established, that nothing further is gained which will aid you in the treatment of that case by a daily re-examination. It does not really matter whether the area of involvement is the size of the palm of your hand, or whether it is two-thirds of the size of your hand, or whether it involves a larger area, your control of the case is practically determined when you have made your diagnosis; and my position is that the child should not be subjected to the discomfort of an examination after diagnosis is made.

I believe too that the direct examination in the infant, immediate examination, the ear to the chest, is a better method in the child or in the infant than examination by any intermediate methods, stethoscope or whatever you bring to bear, and further that position, as has been suggested, is an important factor, and that the infant should be held erect, and my own personal experience is that I can do best with the child in my own hands. It has been my custom, almost without exception, to take the child from the mother. I handle the child in my own hands, and my favorite method is to place the child's buttocks on the one hand, and support the body with the other, and then by rotating it I have the child in an erect position, and I use the ear direct on the chest, front and back.

If new factors are suggested by the conditions found in the sick room, re-examination of course is justifiable.

DR. M. R. WILKINSON, Oconomowoc: Mr. President, Fellow Practitioners, Ladies and Gentlemen: This subject is one of great interest to me, and to everyone who

is in the general practice of medicine throughout the state.

I have noticed from year to year the high mortality reported from the larger cities in pneumonia. The question has arisen in my mind at different times as to what is the cause of this, for I feel positive that if an investigation is carried out it will be found that the mortality is not nearly as great in the country or in the smaller towns as it is in the larger cities. I should like to see this matter taken up by someone particularly interested in this subject, and investigated and reported upon.

The question when considered, leads one to the point as to whether the infections in the cities are more virulent than the infections that occur in the country. Another factor is, the length of time elapsed before a physician is called to treat a case. Does it vary in the different localities?

In regard to the diagnosis I most heartily agree with Dr. Redelings, and as Dr. Myers also stated that repeated handlings or examinations are to be discouraged. It is immaterial whether we have a very slight involvement or a greater involvement. The important thing is to give the patient the greatest possible help, and in the case of slight percussion revealing dullness and auscultation showing rales, we find that we have a case of pneumonia, the question is what is the best to do for the case.

I believe it is absolutely impossible to give any child the best care and treatment without the assistance of a trained nurse. I tried repeatedly for from 24 to 48 hours to carry out the fresh air method, and found that it was absolutely impossible to do so without a nurse. I could arrange things to suit myself, leave the house, and upon my next visit I would find everything had reverted back to the conditions that the adults thought should be. As you know, it takes a long time to remove the teachings of 50 years ago from the minds of the laity. They will say, Grandmother said so and so, and Mother said so and so, and you have all that to contend with in the use of fresh air. So I always insist when I have a severe case on getting a trained nurse on the case.

As far as the antipyretics are concerned, the one that I use and use alone, is the bath, and repeated baths, either by submerging the infant, if the temperature warrants it, or by repeated sponges baths, as the temperature rises and indicates that a bath is necessary. With reference to disregarding the height of the temperature, I think that there is a decided weakening of the heart in allowing a temperature of 104 or 105 degrees to persist steadily for any great length of time, and it is very readily controlled by the tepid baths.

As far as the fresh air treatment is concerned, I have never regretted using winter air for any case of pneumonia, even in a small room in the country, where the bed was within four feet of the open window, and no fire in the room, with a desperate case of pneumonia, the one that I recall in particular was not the case of a child but a woman 63 years of age, and though desperately ill and prepared for death, the patient still lives.

In regard to the treatment of pneumonia, the one cardinal principle that should guide us in the treatment of all pathological conditions of an acute character, and

probably also of a chronic character, is this: to watch the alimentary tract, the tongue, the stomach, and the bowels, because without having them in good condition you cannot expect to get a good result. I regard this as of greater importance in the treatment of pneumonia than in any other condition. If you disregard this, your patient is bound to get into a condition of toxemia, which will cause trouble. For that reason I always try to have the bowels open, and to give light nourishment. That is where the use of sodium bicarbonate, as advocated by Dr. Myers, does good. While you have a condition in which the appetite is lessened, and the patient running a high temperature, you will rapidly have a case of acidosis upon your hands. That is counteracted by the use of sodium bicarbonate, and this together with the small dose of calomel, in the case of a child, I think accomplishes beneficial results.

The man who tries to use specifics in the treatment of pneumonia is the man who will fail in his treatment. The object is to do the best you can for the patient by the treatment, 1st, by sustaining the strength, 2nd, keeping the physiological actions of the different organs working as best you can, 3rd, controlling excessive temperature, 4th, giving fresh air. With this simple treatment, unless the pneumonia comes as a secondary condition, I think that the mortality in the treatment of it will be very low, of course depending upon the malignancy of the infection and the extent of involvement of the lungs. No one can expect a patient at any age to recover where there is a total involvement of the lungs, or both lungs involved to any great extent; but I am far from being a nihilist in the treatment of pneumonia. I believe that great good can be accomplished, but not by the use of specifics. And in the treatment of pneumonia in children contentment or restfulness is a very important factor. For instance, in the use of cough mixtures or sedatives, I always try to use a very simple mixture; in fact, I do not believe very much in the specific ingredients, but something which will coat the tongue and throat with a syrup, and can be given frequently. When the cough is troublesome, give in small doses, and repeat frequently, until the spell subsides. This adds to the comfort and rest of the child, as also does the making of the medicine as agreeable as possible. For that reason I rarely ever give to a child digitalis or anything else of a disagreeable character, but rather try to give a pleasant mixture. My treatment as a rule is sodium bicarbonate, but in solution added to it some aromatic extract of cascara, with a little tincture of aconite. I do not believe in heavy doses of aconite. That, combined with the minute doses of calomel, enhanced by whatever additional cathartic is necessary, will carry a case along physiological lines, and give it the best chance for recovery. And that applies not only to children, but also to people of advanced years. Within the last few years I have had a case of pneumonia in a woman of 84 years, and another case in a man of 86 years, and both recovered. Both have died since that time of general breakdown, and without any particular ailment affecting them.

I think that simple medical treatment, watching the gastro-intestinal tract, and keeping up the nourishment

of the individual, will do more towards recovery in pneumonia than any specific treatment.

DR. L. BOORSE, Milwaukee: Just a word in regard to the statistics quoted by Dr. Myers in relation to the different types of the disease, bronchial pneumonia and lobar pneumonia. If I understood him correctly, he stated that the lobar pneumonia occurs very much more frequently than bronchial pneumonia in the cases cited by him under two years of age. I do not think this is the general opinion, nor do I think that statistics will bear this out. I can readily understand that the cases quoted from the hospital might give these statistics, for the reason that bronchial pneumonia is very frequently a secondary disease—in fact, usually a secondary disease, following the infective diseases, such as measles, influenza, whooping cough and diseases of that kind which do not permit of the entrance of these cases into the hospital. But I think as a matter of fact bronchial pneumonia occurs very much more frequently in children under two years of age than the lobar type of pneumonia.

I simply desire to condemn one method of treatment that is still in very general use, namely, the application of heavy poultices, and particularly the use of the anti-phlogistic poultice which forms a dense heavy mass, and interferes with respiration.

I am very much in favor of the fresh air treatment. I have never been convinced of the advantages of the cold air. I believe the virtue is due simply to the moving of fresh air more than to the extreme cold.

With regard to the use of an alkali, I generally use citrate of sodium. I use it for the reason that it seems to have the effect of reducing the viscosity of the blood, and in that way facilitating the passage of blood through the small blood vessels. It also acts as a stimulant to the secretions.

Where a heart stimulant is required, I have a preference for strophanthus rather than for digitalis.

DR. C. S. SHELTON, Madison: I do not know that I can add anything to the discussion, but wish to emphasize certain points. First, with regard to the diagnosis. As Dr. Myers has said, there are often delays and difficulties. Often these cases are supposed to be cases of indigestion, from the fact that it is noted that there is an intermission of the digestive function, sometimes from the very beginning, from the constitutional disturbance, and then that is assumed to be the case; and oftentimes no examination of the lungs is made; and so it happens that after a time the doctor finds that he has made a wrong diagnosis. Then there is the delay in regard to the diagnosis which he has mentioned. We used to think that this was caused by the consolidation appearing first in the interior of the lungs and gradually working to the surface. He has now explained it in his apical arrangement.

Fortunately the prognosis of these cases is usually favorable, and if we use our common sense, as Dr. Wilkinson has indicated, and treat the patient using our common sense, and not endeavor to be too scientific, or regard

special symptoms we as a rule will have a favorable result.

So far as the treatment is concerned, we cannot put too much emphasis, as has been stated, upon the digestive organs. The withdrawal of food largely is absolutely necessary. We are dealing with an infection, and therefore we should have all the causes of infection reduced to a minimum; and we know that the great cause is the indigestion of food of any sort, and so the food should be limited as much as possible. When we are dealing with any infection, elimination is the key note of our practice, so clean out the bowels as an initial part of the treatment. And I am fully in favor of small doses of calomel, at least during the early part of the disease, enough to maintain sufficient elimination.

What I wish to particularly emphasize however, is the use of the warm bath as an antipyretic. Years and years ago, when we were talking about antipyretic, something that would reduce the fever, I discarded everything but water. Fifty years ago we used aconite, but I discarded everything but water. I remember that 40 years ago I had a desperate case of a child sick with pneumonia, and it went on from day to day, from bad to worse, until I abandoned all hope. And one day when I went up there and looked at the child, it was sleeping quietly and peacefully, the respirations were long and natural, and I was perfectly astounded. I said to the mother, "What has happened, I expected to find the child dead." It was the crisis in the case and it was a crisis in my therapeutical career. "Why," she said, "a neighbor woman came in here, and she is quite a nurse, and she had some old army blankets and made a sort of a jacket with arms up here, so it came right up to the neck and down to the knees, and she rang it out in hot water, and then put another dry blanket on the outside, and pinned it down with safety pins from here down to there, and the child went to sleep, and in two hours was a great deal better." Well now, it is the wise man who does not sniff at anything in this world. He does not care what the origin of it is, or where it comes from, if it is good. It may be the suggestion of an old woman a hundred years old, but he thinks about it, and if it has the element of common sense and reason in it, he adopts it. That is the difference between the wise man and the fool. He has a receptive mind. If anything comes along that is good he should recognize it and use it in his practice. I have used that warm pack for 40 years habitually, and, as I often say, if a man's daily experience 365 days in the year for 40 years is not good for anything, what is good for anything, and I have invariably found benefit from it. As a rule I use some light material that shall not be like a poultice of anti-phlogistin, and have the child's arms folded across the chest, and have it come from the neck down below the knees, and apply a cold compress to the head, and a hot water bottle to the feet; keep the head cool and the feet warm, ring it out warm. When I first begun I thought it was the temperature of the water, and so I used cold water, that is, if the temperature was very high, never ice water, but perhaps water as cold as the bath. After a few years I found that it was not the temperature of

the water so much as it was the water that did the good. I do not disturb the child any oftener than necessary. I usually make a rule that if the temperature goes above 104 and persists there, to use the pack uniformly in all cases. In fact I use it for lots of other diseases too, use it that way. I tell the people to use it nice and warm and probably at first so that the child will squirm a little bit when you put it on, but not warm enough to be uncomfortable, and sometimes use a bath towel long enough to go around, so as to make a good thickness, then a lighter material on the outside. I take the temperature from time to time, and the frequency of the application will depend upon circumstances, the result of your application; I try to get along applying them once an hour; if the temperature is very high I apply it every half hour, but that is usually more than is necessary. If you have everything ready, it only takes a moment to make the change of your pack.

DR. L. M. WARFIELD, Milwaukee: Mr. Chairman and Members of the Society: I cannot let a statement such as has been made by two of the speakers go without protest, namely, that one should not examine the cases from day to day to find out what is going on. I think that would be a very bad practice. The mere fact of the prognostic value is something. Especially in children, the onset of an empyema is not always the easiest thing to diagnose, and the recognition of an empyema as early as possible is certainly of great moment to the child. And so, if only from the two standpoints, that of prognosis, what to tell the family as to what is going to be the outcome, and the early catching of complications that might arise, I think the little disturbance that one would do to the child will be more than compensated by the actual knowledge obtained.

Just a word more. I think it is generally admitted that pneumonia patients die from two general causes, one being toxemia and the other acute cardiac dilatation, and I have noticed in doing large numbers of post mortems in the last 15 years, that many pneumonia cases which are brought to the autopsy table have enormous dilatation of the stomach, and I have been impressed by the probable etiologic relationship of the sudden acute dilatation of the stomach in these cases of toxic death to the death apparently from the pneumonia. I have practised sometimes the passing of a stomach tube in order to relieve these cases of acute stomach dilatation. I think it is more or less futile to use enemas. It is impossible to get the gas out of the stomach with an enema, and as a matter of fact the cases come on as a rule very acutely. I think this is a matter that we may pay a little more attention to, and that is another reason for constantly examining the cases.

DR. J. F. RIORDAN, Berlin: I should like to state that there is some good reason for giving the sodium bicarbonate, or some simple alkali, because you find that the lung in pneumonia is of an acid reaction.

As to the cold air, I believe that it has two actions. I believe that the cold air is beneficial. We cannot always prevail upon our patients to acquiesce in this treatment.

but when we can do so we should. And the two benefits derived are, first, the fresh air is of course a sedative, and I believe the cold is likewise sedative in its action; and secondly, I believe that it is antipyretic, because there is naturally a certain heat radiating surface of the body that is exposed to that cold air.

I believe that it would be wrong not to examine our patients, although of course we must use good judgment, because of what Dr. Warfield has said about the value in prognosis, and certain complications of other things, and for the further reason that we must watch the heart.

When we cannot use the bath, we should of course do the next best thing and use cold applications to the head.

DR. A. W. MYERS, Milwaukee: I think that watching the effect of fresh air on the patient with pneumonia does give one the impression that they are distinctly more comfortable in the cold air than in the warm air. Of course in the summer the cold air is not available. But the great amount of relief that is produced by getting a pneumonia patient actually out of doors even in the winter, is so marked, that I believe that, even though we may not have the physiological explanation as yet, the cold air is distinctly desirable, except in the very small minority of cases.

With regard to the examinations, I did not wish to convey the idea that I thought the child ought not to be examined. I mean only that the pneumonia patient needs sleep and rest, and should not be disturbed with unnecessary frequency. And the carrying out of a careful examination of the chest, and of the heart, seems to me to be a perfectly possible thing to do daily without any unreasonable amount of disturbance, and I think it is distinctly an advantage to examine the chest every day, in order to make sure of the condition of the heart, and in order to detect at the earliest possible time any appearance of empyema. And in addition to that, one of the most frequent complications of a croupous pneumonia, otitis media, so it is necessary to examine the ears frequently during the course of the case, because the addition of an acute infection of the ear may make very little influence on the temperature during the course of the high febrile stage, and yet it might need prompt action. So the examination of the ear and of the urine are equally important in these cases.

I think what Dr. Warfield has said about the dilatation of the stomach as a cause of sudden death is an important thing to bear in mind. It is to be remembered that croupous pneumonia is a disease of short duration, and that it is not necessary to force feeding, so that the point that Dr. Wilkinson brought out, that you must keep the intestinal tract in good clean condition throughout the course of the illness is a very important one to bear in mind.

I was very glad to hear Dr. Sheldon's vivid description of the warm pack. It has seemed to me that the warm pack is so much better borne by small children, that it is an extremely satisfactory way of reducing the temperature.

In regard to the incidence of the broncho-pneumonia as compared with the croupous pneumonia, I attempted to

give the idea, perhaps not very clearly, at the beginning, that I was speaking only of the primary pneumonias. Of course when you consider the actual number of broncho-pneumonias in young children, they undoubtedly would preponderate; but the great majority of those are secondary to measles or whooping cough or scarlet fever or influenza, or some of the other acute infections, and those I have not attempted to include in the discussion today. The fact which I wish to emphasize is that the croupous type of pneumonia is a very common type of illness even in young children.

Of course the types of bacteria in the different pneumonias vary. In the croupous type of pneumonia you usually have the pneumococcus; in the catarrhal you have it in the large percentage of cases, and in addition you find the other organisms of which Dr. Redelings made mention.

In regard to the question which Dr. Wilkinson spoke of, the lower mortality of pneumonia in the country, I think that is a very interesting subject for study. I do not know anything about it personally. My own impression is that perhaps in the city you see a larger number of the broncho-pneumonias secondary to the acute infectious diseases of childhood.

CASUALTIES IN THE MEDICAL CORPS OF THE BRITISH ARMY.

There has been such an astonishing amount of misinformation, exaggerated and sensational statements, published in this country regarding the casualties among medical officers in the British Army that Col. T. H. Goodwin of the British Army Medical Service, now in this country, cabled to the British War Office for the actual facts. He received the following data: The total casualties among medical officers of the British forces, on the western front, from the beginning of the war to June 23, were: killed, 195; wounded, 707; died of disease, 62. Hence the total number of casualties from actual war injuries on the western front was 902, of which 195 were killed. This is entirely different from some of the statements which have received wide publicity in this country—some even semi-official in character—which have reacted to the detriment of the efforts to secure officers for the Medical Reserve Corps. *Jour. Amer. Med. Assoc.*, July 7, 1917.

HEALTH DEPARTMENT ABANDONS DIAZO TEST.

The diagnostic laboratory of the department of health, New York City, announces that last year 1,700 specimens of urine were examined for the diazo reaction. Of this number less than 250 gave a positive reaction. As there is great doubt expressed as to whether this gave a real assistance to the physician in arriving at a diagnosis, the department feels that the time consumed in this work might have been better employed. It has therefore decided to discontinue the examination of specimens for the diazo reaction.

THE ARTIFICIAL FEEDING OF INFANTS.*

BY A. L. KASTNER, M. D.,

MILWAUKEE.

In the preparation of this paper I have, as far as possible, endeavored to present its various topics from the practical and clinical standpoint. He who browses in the immense literature on this subject, finding constantly changing theories and many methods, some complex, others entirely unsuitable for daily practice, often comes from his reading utterly confused. There never has been a time when the need for simplicity in our conception and treatment of everyday feeding problems was greater.

To retain our stability we are compelled to rely on a few simple rules and the employment of some simple methods. As our knowledge increases or is modified by study and experience so can we enrich and modify and even change our methods and rules. The rule can always be applied first and changed or abandoned according to our judgment when it proves unsuitable for the case in hand. Of course, as much depends upon our ingenuity in meeting the exception as in our ability to apply the rule. Repeating the truisms, "Every child is a law unto itself" and "There is no perfect method of infant feeding," does not set us on our way. Rather, it only reminds us of our limitations and the difficulties that beset us. At the outset we must realize that certain foods are not available and certain methods not applicable for certain babies.

Almost everyone stands ready to defend his own methods, and so do I, but because I have seen good results follow the use of many diverse methods, I have learned tolerance. It seems to me that it really makes little difference in the general results what particular method one uses as long as it is simple, is thoroughly understood, does not require a table to be carried in the vest pocket and is backed by a knowledge of milk and whatever else is used to make up the formula.

Personally, I prefer to use simple dilutions of whole milk. These, I find, best meet most ordinary indications. Their preparation is easily understood and in the home or in the institutional diet kitchen give rise to the least trouble, work, and inaccuracies. In simple dilutions of whole milk, which

has an average fat content of 3.5 to 4%, the fat and proteins quite automatically assume percentages that meet the requirements and tolerance of most children. The whole milk dilutions save us from feeding dangerous fat percentages. In the rare instances where there is a distinct indication for higher fats than whole milk in dilution supplies, it is a simple matter to add an ounce or so of cream to the twenty-four hour mixture. More often am I compelled to use skimmed milk than to reinforce with cream. I find it advantageous to observe a wide latitude in the selection of the diluent for the milk. Most often plain water is all that is required. When there is a definite indication for the exhibition of starch, but not as a routine measure, the cereal waters (i. e., barley, plain or dextrinized, oatmeal and wheat flour) are added to the milk.

Sugars, the great disturbers, I try to use with caution. When I say that I prefer the cane and malt sugars to lactose because I believe they cause less digestive trouble, I am only voicing an opinion that can be taken for what it is worth. "When in doubt, give no sugar" is a good maxim. "When beginning the use of sugar, start with small amounts and gradually work up" is another, just as good, and will apply to the other food constituents as well.

This brings us to what may be called the tentative formula. A common error in artificial feeding is that of attempting at the very start to supply the infant with that amount of food which either from the standpoint of percentages or calories, or both, is deemed sufficient to allow him to thrive and grow. The only safe method of procedure is to begin with a formula which for that particular child is low in percentages and calories, allowing succeeding experiences to determine the gradual increase of the strength of the food until in a longer or shorter period he is getting something upon which he thrives. I will not quarrel with either percentages or calories. I need and use them both. A truly intimate knowledge of a formula is ours only when we know what the proportions of the food constituents are and what food value they represent; but it is always best to bear in mind that percentages and calories only help to give us an insight as to what the food is and that the baby's skin, muscles, general development, weight, stools, demeanor, and disposition tell us of the foods' actual value and determine its modification. A

*Read at the 70th Annual Meeting of the State Medical Society of Wisconsin, Oct. 4-6, 1916.

formula often looks all right but the baby may tell us it's all wrong. Any method simple enough for ordinary everyday feeding will not allow of an absolutely accurate calculation of either percentages or caloric values. Neither is this necessary. All that is required is an approximate idea of these values and if, perchance, our conception of the actual values is too high or too low we maintain a relative accuracy in passing from one calculation to another in our efforts to meet the individual demands of the baby. In simple whole-milk mixtures the determination of both the percentages and calories present very simple problems in division, multiplication, and addition. In determining the caloric needs of the artificially fed infant I have found the rules laid down by Dennett¹ of great value. "Fat infants over 4 months of age need 40 to 45 calories per pound. Average infants under 4 months of age and moderately thin babies of any age need 50 to 55 calories per pound. Emaciated infants of any age need 60 to 65 calories per pound."

Should we feed raw or boiled cow's milk? I unhesitatingly declare myself in favor of boiled milk. We have two valid reasons for boiling milk: first, to destroy pathogenic bacteria; second, to make it more digestible. The first reason I will dismiss with this statement by Morse.² "All milk except the cleanest should be cooked before being used as a food for infants." The second reason is not so readily dealt with and I can at this time treat it but very superficially and must content myself by referring to the writings of Biedert, Brennemann, Dennett, Finkelstein and Morse for full and masterly expositions.

The boiling of milk works in it many changes and it must be distinctly understood that raw and boiled milk are entirely different foods; one, however, no more artificial than the other. The term "boiled" admits of many interpretations. In private and out-patient work I instruct that the milk should be actively boiled in a single boiler for three minutes, stirred constantly to prevent scum formation as far as possible.

In the diet kitchen of the Children's Hospital and at the Home for Dependent Children where large quantities of milk are prepared, the milk is heated in a double boiler for 30 minutes, never quite reaching the boiling point. Clinically, I have so far found no difference in the behavior of milk cooked by either of these two methods.

From the practical standpoint what concerns us most is that boiled cows' milk in the stomach forms a fine, soft, flocculent curd and that raw cows' milk forms large tough curds.³ The large hard curds formed by raw milk in the infant's stomach often pass through the entire digestive tract and appear in the stools as real casein curds, firm, yellowish-white masses, smoothly rounded from peripheral digestion and ranging in size from that of a hazelnut to that of a pea and smaller. These casein curds are never found in the stools of infants fed on boiled milk. The mere appearance of casein curds in the stool would not be of moment were it not that they are often accompanied by symptoms of a disturbed digestion; notably diarrhea, vomiting, and colic. Much clinical evidence has been presented in the literature which shows that these symptoms will readily disappear by the simple expedient of boiling the milk and so I have found it in practice. Especially would I like to mention the long recognized and great value of boiled milk, more particularly in dilution, in the treatment of the simple diarrheas.^{3 4} When casein is fed in very low percentages, as in top-milk mixtures, it may give rise to no signs of indigestibility. The same is true when a flocculent casein curd is formed by the use of sodium citrate, but when whole-milk mixtures are fed raw, we realize that there is a clinical picture of casein indigestion. Boil the milk and casein, because it does not form hard, tough curds; it becomes digestible once more.

We have no evidence whatever that properly modified boiled milk will cause digestive disturbances in normal children, except constipation, perhaps; but we have much evidence that boiled milk helps to overcome digestive disturbances.⁴ As far as constipation is concerned I do not deny that heating milk, especially to or near the boiling point, will have this tendency, but the constipating effect is much less than is popularly supposed. Besides, we should all be duly thankful for a little constipation in our feeding cases.

We have no data at present that will allow us definite conclusions as to the comparative nutritive and utilization values of raw and boiled milk. There is probably little or no difference.²

Neither can we make definite statements on the influence that boiled milk has in the causation of rickets. We do not know exactly what the etiology of rickets is.² Evidence to prove that heated milk produces scurvy, if not conclusive, is so strong that

we cannot ignore it. Fortunately we have in orange juice a preventive as well as a cure. I always feed orange juice to all babies during the entire time they are on boiled milk, making an exception only in the presence of the more severe digestive disturbances and in infants under 3 months of age. That the ferments of milk are destroyed by boiling⁵ need disturb us not at all, for they play no known part in digestion or assimilation.² Milk heated in an open vessel forms a pellicle or scum which is composed of almost equal parts of fatty matter and protein, together with a small percentage of ash.⁶ A certain loss of substance, then, occurs when milk is boiled. I have found by testing with the Babcock method that milk cooked in a double boiler, as previously described, loses on an average about .5% in fat. That is, milk giving a fat test of 3.5% before boiling will show only 3.0% after boiling.

It appears that various methods of boiling are accompanied by differing amounts of fat and protein loss. The method of boiling then is a matter of some importance. I will make a fuller report on this phase in the near future.

Keller's Malt Soup. Because this preparation and its modifications have so many times proven valuable in obstinate cases of low fat tolerance (as shown by recurrent diarrheas, stationary weight, or downward progression to decomposition) when the ordinary carbohydrates are not well borne and in stubborn constipation, that I cannot forbear to give it grateful mention. It is not necessary or even advisable to adhere to the bottle label. A wider field and more satisfaction will follow if the formula is modified to suit the individual infant. The bulk, whatever it is, of the extract and the flour should always be the same.¹ For instance, one tablespoonful of flour calls for a scant tablespoonful of Malt Extract. The milk and water may be in most any reasonable proportion.

Finkelstein's Albumin Milk. My personal experience with this has been practically limited to cases at the Children's Hospital, for a few attempts to have it prepared properly in the home will convince almost any one of its impracticability in this field. The original formula has been adhered to strictly, but up to the present time I cannot truthfully credit it with many brilliant successes. This by no means implies that I condemn it or even con-

template discontinuing its use, for I strongly feel that like all of Finkelstein's work, it is based on good, sound clinical experience and not on theories alone: and that even if it has given me a few disappointments, a sufficiently large number of favorable results warrant a belief that with a greater knowledge of its correct administration will come greater satisfaction.

The Examination of Stools. The information in regard to digestive disturbances that may be so easily gathered from a simple microscopic examination of the infant's stool is unique and invaluable. By the aid of a wooden tongue blade, a few slips of litmus paper, some nitric acid, and a little Lugol's solution, we may for ordinary clinical purposes, obtain results as reliable as those from a chemical examination. Only rarely will a microscope be required to save us from error. Broadly speaking, the composition of the food determines the character of the stools; but the infant's digestive power, the activity of peristalsis, the amount of absorption and the intestinal bacterial flora, by acting one on the other, are modifying factors.²

The character of the stools of an infant fed on cows' milk will depend largely on whether the milk is given raw or boiled and also upon the relation of the fat and the protein percentages. When the milk is fed raw, with the protein and fat in about the same ratio as they are in mother's milk, the stools, if the baby is thriving, will be almost like that of the breast fed, i. e., golden yellow or a little lighter, of a somewhat sour odor and acid in reaction. When a whole-milk mixture is fed, the color is lighter, the odor borders on the cheesy and the reaction commonly alkaline on account of protein decomposition. In raw milk stools one is very apt to find the hard, beanlike protein curds that I have already mentioned, and, besides, the fine fat curds, which may be white, yellow, and even green. The fat curd is always very soft and can be mashed by light pressure with the tongue depressor. Fat curds, no matter what their color, are always white on the inside.

The stools from a boiled milk diet are smooth, homogeneous, light yellow in color, and allow themselves to be spread out like good stiff ointment. Their reaction I find to be neutral as often as faintly alkaline; their odor, more or less cheesy. When very low fats and high proteins obtain in the milk mixture, as in skim milk and buttermilk,

the stool often shows a very greasy, shiny surface where it has been smoothed out by the tongue blade. In this instance it does not mean free fat, for, when that is present, it will leave a grease spot on a bit of paper.⁷

The reaction of the stool has always received more attention than its slight clinical importance warrants. It is easily determined by rubbing moist litmus papers in fresh stool or in the freshly spread out portion; better still, by rubbing the papers with a large eyed catheter previously inserted in the child's rectum. As a rule we can say that an acid reaction points to a relative excess of fat and an alkaline reaction to a relative excess of protein.² Simple excess or the fermentation of carbohydrates in pathological conditions give a very acid stool which is so frequently the cause of excoriated buttocks.

The color of the stool depends in a great measure on the food. Milk mixtures give all shades of yellow; malt sugars, starch and beef juice, giving the brown hues. Green stools, the bane of mothers and nurse maids, may, clinically speaking, mean much or nothing at all. Though commonly supposed to be due to a change of the bilirubin to biliverdin, strange as it may seem, really nothing is known of the reasons for this. Koeppel⁸ lays the change at the door of a peroxid-splitting ferment. We will probably be safe in saying that a light shade of green, or a green that develops after the stool is passed and is only found on the outside of the feces, has no significance and that darker shades of green spell disturbance or pathology. In diarrheas, as in the giving of calomel, the green color seems to be an indication of the food's rapid transit through the bowel. If a green color is produced by the bacillus pyocyanous, nitric acid decolorizes it while biliverdin and nitric acid give a play of colors.²

The white, hard, sometimes crumbly soap stool due to fat indigestion, is well known; and when we see one streaked with blood we are almost safe in making a diagnosis of fissure ani. Not infrequently a stool is observed that is white or light colored on the surface only. It is due to leucohydrobilirubin, and is of no more significance than a green surface coloring.² I have often seen a pinkish stain on diapers directly around the stool and have considered it due to urates but have lately found that Morse considers it "due to some unknown change in the bile pigment." Broadly speaking, when

mucus can be discovered macroscopically, it is best considered pathological. Anything that looks like mucus should be stained with Lugol's solution⁹ for partially digested starch can simulate mucus closely. The starch, of course, reacts blue to Lugol's. Though I have tried to hold myself down to what might be called crib-side methods of stool examination, I would in closing this subject, like to mention the microscopical method of Morse and Talbot² as a rapid means for getting a general idea of fat digestion. Cowie and Hubbard¹⁰ have devised a sort of modified Babcock method for the determination of the total fat in stools that could be utilized with little trouble.

SUMMARY.

I have only attempted to present for your consideration and discussion a few topics that I thought would prove of general interest.

We do not need to be reminded of the difficulties in the field of infant feeding. They are self-evident. Simplicity in the conception and treatment of every day feeding problems is a present day necessity. The employment of (I do not mean strict adherence to) method and rule and the use of whole-milk dilutions make for simplicity.

Neither percentages nor calories can safely be ignored if we desire an intimate knowledge of the food we are prescribing.

Judging from clinical experience alone, I prefer boiled to raw milk in infant feeding because it is safer, lessens the danger of digestive upsets, and gives better and more uniform stools. As a cure and preventive for diarrheas boiled milk deserves additional emphasis.

Keller's Malt Soup has a wide field of application and proves itself a valuable food.

Personal experiences with Finkelstein's Albumin Milk have up to the present time, given me some disappointment and some hope.

Even a simple, macroscopic, crib-side stool examination is an interesting procedure that will reward us with invaluable, unique and reliable information.

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DISCUSSION.

DR. L. BOORSE, Milwaukee: Mr. President, and Members of the Society. I want to congratulate the author of the paper for his terse, clear-cut, and practical treatment of this subject. I know that he has done more than to browse in the immense literature of the subject, and that his convictions are founded upon years of careful study and matter of practical experience. The literature treating upon the research and scientific development of the artificial feeding of infants is truly voluminous, and reflects the intense interest that many earnest workers have displayed in their attempt to solve the problem of supplying an adequate nutriment for the unfortunate infant deprived of its natural sustenance.

The problem of artificial feeding of infants is one of the most important and one of the most difficult in the whole domain of pediatric practice. It has been truly said that "logically and ethically infant feeding represents the heaviest responsibility that devolves upon the pediatrician or the general practitioner of medicine." There is no short-cut in the solution of this problem. Success in the feeding of infants can only be attained in greatest measure in an infinite knowledge of food products, the nutritive requirements, and the physical and functional peculiarities of the child.

Our ideas of infant nutrition and artificial feeding have undergone many changes in the last decade, and while we have acquired a great deal of knowledge through laboratory research and clinical experience, which has resulted in a material reduction in the mortality or morbidity of artificially fed infants, we are still far from the goal of perfected methods that approach in result the ideal of breast feeding.

The simplified method of modified whole milk feeding advocated by the author is the method that at the present time is in very general vogue. I am convinced of its advantages and of its limitations. I use this method of modification extensively, but have not adopted it as a routine. It is not an innovation, but the oldest method in the recorded history of the artificial feeding of infants

with cow's milk. Michael Underwood, in his treatise on the Diseases of Children, the last edition of which was issued in 1847, advocated the use of cow's milk, and suggested the addition of barley water as a diluent. This was the beginning of milk dilution in artificial feeding. Underwood also urged that the milk should first be boiled, "to render it less opening, but when the child is several months old, or may chance to be costive, it need only be warmed."

The author of this paper has entirely avoided the scientific investigation and research which has thrown a great deal of light on the problem of infant feeding, and which, of course, I can allude to only very briefly, as it applies to the method of whole milk modification. He refers to the necessity of an intimate knowledge of the food products, and the percentage and caloric methods as applied to the modification of whole milk.

It seems to me it makes very little difference what method of feeding we adopt, providing we have a clear knowledge of the food products, their nutritive value, the requirements of the child and a method of modifying the milk to attain any certain definite food or nutritive value that may be indicated.

The preparation of a food to meet the individual requirements of the child, implies an intimate knowledge of the caloric and nutritive value of the essential elements of the food product, before we can intelligently modify them.

As regards boiled milk, that is a method which is very generally used, and, as stated before, it was advised very early, in the beginning of the artificial feeding of infants.

I do not like the quotation from Morse, "all milk except the cleanest should be boiled." I would put that, all milk except the cleanest, whether it be boiled or unboiled, is unfit for infant feeding. You cannot render milk that has deteriorated, a proper food for infant feeding by the simple process of boiling.

In discussing this problem, we always, or at least very often, lose sight of discriminating between the normal child and the one whose digestion has been disturbed by previous improper methods of feeding. A child whose digestion has been disturbed requires very different feeding from the normal child.

The method advocated by the author, of beginning with weak preparations, is a good one, and if that were strictly followed out and the digestive ability of the child tested carefully, there would be less disturbance in digestion. We should not attempt at the beginning of artificial feeding to supply a food adequate for a normal gain of the child, but by beginning with the weak preparations, and testing the digestive ability of the child, there would be less disturbance in digestion. We should not attempt at the beginning of artificial feeding to supply a food adequate for a normal gain of the child, but by beginning with the weak preparation we can build up the formula until we reach that point where it contains sufficient nourishment.

From the very beginning of scientific methods of feeding, in the early seventies—about 1870 or a little later period—it was considered that the protein was a great disturbing factor in the digestion of cow's milk, and that

was maintained up until within a very few years, when we found that we were greatly wrong, and that the protein was readily and easily digested providing we did not give a high percentage of fat or carbohydrates.

Metabolism experiments and feeding experiments have shown that a greater percentage of protein is essential in cow's milk feeding than in breast feeding. In breast feeding the amount of proteins is limited to about 1.25 per cent.

Metabolism experiments indicate that growth and development are dependent upon protein containing certain specific amino-acids, and that therefore the nature of the protein furnished is of greater importance than the amount.

Abderhalden has isolated some 16 or 18 different amino-acids from proteins.

Osborn and Mendel have shown that some of these are absolutely essential for normal growth while others are of relatively little importance.

They have seemingly proven in their experiments on animals that growth and nutrition cannot proceed in a normal way, unless the amino-acids, lysin, cystin and tryptophan are present in the food. These amino-acids are found largely in the lactalbumin of the milk and are notably deficient in the casein. It stands to reason then, as pointed out by Holt, that in order to supply these specific amino-acids in modified cow's milk feeding, a much higher percentage of protein must be given than ordinarily exists in breast milk.

With reference to the boiling of milk, feeding experiments have been carried out here in the University of Wisconsin, and by others, showing that boiled milk is in itself an inadequate food. Rats fed on boiled milk have failed to gain, and die much sooner than those fed on raw milk, showing that it is inadequate food. Experiments by Aaron have also shown that it is only necessary to add a little extractive, as from bran, or from vegetable extractive, to contain the normal growth of the animal. When these are omitted, the animal fails to grow, and the condition results rapidly in death.

In the experiments carried out here in the University in the feeding of animals with boiled milk, it was also shown that a gain in weight could be produced by simply adding a little raw meat juice or a little yoke of egg. When this was omitted the animal died very promptly, showing that the heating destroys some product, some essential element that is necessary for growth and development.

PRESIDENT: The discussion is to be continued by Dr. W. Campbell of Menomonee Falls.

DR. W. CAMPBELL, Menomonee Falls, Wis. I have enjoyed the two papers immensely and feel that they have taught me a great deal, but wish to discuss this subject from the standpoint of a country physician, who has not the ideal conditions to work under that are found in institutions devoted to this particular line of work.

For a period of about twelve or fourteen years I followed the Holt Method of Infant Feeding with pretty

fair success, and began to feel that the feeding of young infants was not such a difficult subject to master. About this time my youngest child was born and we were forced to feed it artificially, because of the mother's illness, and I was not long in realizing that I had been very much mistaken in my views on this subject, for, feed this child as you would, on the most carefully prepared mixtures, with the help of some of Milwaukee's best physicians, it was seemingly impossible to find a suitable food for this child, and not until we had given him a food that was absolutely unscientific in its composition could we get any results that were beneficial.

So that I have come to the conclusion that, when you lay down rules for the scientific feeding of infants you are often doomed to great disappointment.

If one could start with a proper supervision of milking and the handling of that milk up to the time the child receives it; that the cows are properly fed; that the child's surroundings are favorable, we could feed the average child successfully with Holt's Method.

The use of alkalies such as sodium bicarbonate, lime water, etc., is today considered obsolete—nevertheless it seemed I had less trouble with the employment of these agencies than with the newer methods, if only milk of a low bacterial count can be obtained.

One peculiar feature affecting milk was brought to my attention, when farmers began feeding their cattle grain slops and silage of different kinds, and that was the increased acidity of milk and the harmful effects it seemed to cause in babies whose digestive organs were weak, especially if the milk was boiled—not only was the character of the food changed but the smell became very offensive and repugnant to the child.

There is, it seems to me, no valid excuse for the routine methods of boiling milk and the destruction of harmless bacteria that have such a stimulating effect upon the rennin in the child's stomach. The tendency of boiled milk is to cause scurvy unless guarded against. You do not add to the pleasantness of the taste, and also the tendency of such milk is to cause constipation in most instances.

For these reasons it seems to me that whatever good you derive from this procedure is more than counteracted by the harm that attends it. There is some chemical change that takes place in boiled milk which has not, as yet, been determined. Milk that has been boiled will keep longer, but often times, due to this fact, the mother or nurse will keep this food for use after decomposition has set in, and it becomes the source of intestinal infection arising from pathogenic bacteria acting upon the proteins in the food.

I have also learned that it is not always wise to utterly disregard the suggestions of mothers or some old lady who may have something to offer in this perplexing work, and who may stumble upon some mixture that will in some particular instance succeed, when more carefully prepared foods have failed. It was these same mothers who were the first to use cereals in infant feeding, which is so generally accepted by the medical profession today.

Many a pediatricist has at different times in his career prided himself upon having successfully handled some particularly difficult case, entirely forgetting that if it were not for the digestive and assimilative efficiency of different children he might have failed in his work. Often we give a food that is apparently unfitted for a delicate child's stomach but the patient's digestive organs will adapt themselves to the particular food administered and continue to thrive.

Because of the many difficulties met with in infant feeding I have learned to go carefully in starting with a poorly fed and undernourished baby, being careful to put the child on some food that will not tax its digestive organs; such as, albumin, rice, or toast water, and give the child a rest for about thirty-six hours, after which give it some very weak formula, gradually increasing its strength.

But when you begin to figure percentages for a child of a certain age and weight, and the amount of food value of cream and milk mixtures that are indicated, one is apt to get into trouble from the start. See that the child is resting comparatively, weigh it regularly, and do not examine the stools too closely for undigested food. The presence of lumps of fat or casein often does no harm. Should the baby occasionally vomit and is relieved we ought to be glad that the child's stomach has taken this means of disposing of food that is distressful.

This subject is a very interesting one to me, and I should like to hear from other members who have to deal with these cases and suggest methods of feeding.

DR. PHILLIP ROGERS, Milwaukee: I am not a pediatricist, and I am not qualified to discuss this subject from the scientific standpoint, and while I am far from wishing to say anything in disparagement of scientific feeding, I should just like to relate my own experience with my own first boy some years ago, as showing how scientific feeding may occasionally fall short of the desired results in spite of all efforts, and how entirely unscientific feeding may occasionally fill the bill, and turn the tide. This was quite some years ago, and like Dr. Campbell, I had thought up to this time that I had learned something about scientific feeding. Then my boy came into the world, and at three months it became necessary to put him on the bottle. At that time he weighed 12½ pounds. The breast supply giving out, bottle feeding was tried, as cautiously and carefully and as scientifically as possible, with the guidance of Dr. Holt. In spite of that the child did not thrive at all, but did quite the contrary. And in spite of the most careful changes of the formula, adapted to the digestive ability of the child, he steadily went down hill, until at nine months he weighed less than ten pounds. An alimentary infection had set in meanwhile, so that the stools were so foul that every time there was a movement or passage of gas, it was necessary to open the windows and air the house. The child was vomiting almost everything that was put into its stomach. All this time scientific feeding had been tried, and I had specialists in consultation, to aid

me. Then in desperation I tried taking the other tack, and I fed the child on eight different kinds of food in 24 hours, including whole milk, unboiled and undiluted, whey, one feeding of breast milk, which a patient kindly supplied, malted milk, Mellin's Food, and I have forgotten what the others were, but there were eight different feedings, no two alike. And from the moment I began that very unscientific plan of feeding, the child gained half a pound every week until it was 12 months old. (Laughter and applause.)

DR. A. L. KASTNER, Milwaukee: Apparently it is a great mistake to say what one should do all the time in every case. I think I have learned something from Dr. Rogers' recital.

As far as milk being an inadequate food is concerned, that is a matter which up to the present time has hardly been settled conclusively. We know that thousands and thousands of babies in France and Germany and continental countries have been fed on boiled milk, and they have not all developed scurvy. That scurvy is always a menace, I understand, hence the orange juice, vitamins, whatever they may be. But as far as the difficulties are concerned in milk feeding, we have difficulties in feeding milks of all kind, whether boiled or raw. Our difficulties are with us always. I am not saying that boiled milk will get rid of all of our troubles; it surely will not; I have not found such a thing as yet, I wish I could.

The question of silage has been brought up. I am intensely interested in that subject, but have come to no definite conclusions. As the doctor has intimated, it does seem to have some effect on the milk, and, while not certain, I feel quite sure that it does tend to produce a diarrhea when the milk is given raw, and even when it is boiled; I tried it both ways.

I do not mean to give the impression that I confine myself to boiled milk in all my feeding efforts. One cannot do such a thing.

Under certain circumstances casein is indigestible. There is such a thing as casein indigestion. I know that I can almost always stop symptoms of casein indigestion by boiling the milk.

NEWSPAPER BANS PATENT MEDICINE ADVERTISEMENTS.

The *Harlem Local* of New York has written a letter to the health department stating in strong terms the stand it has taken against patent medicine advertisements. It writes "We shall continue to refuse to accept advertising not only of scurrilous patent medicine tradesmen, but also of liquor and tobacco manufacturers. We have our own convictions as to the uses and abuses of these wasteful and nerve eating drugs and do not propose to be a party to their exploitation, directly or indirectly."

PITUITRIN IN OBSTETRICS.*

BY E. E. TUPPER, M. D.,

EAU CLAIRE.

The promiscuous and injudicious use of pituitrin in obstetrics, and the high infant mortality in childbirth seem to call for an investigation of the use of this powerful drug.

The investigation has been of great value to me and I hope that I shall be able to make it of value to the members of this society.

The methods I adopted for my investigation were: First, a review of all the literature that I could procure; second, sending out letters of inquiry to a dozen or more of the leading specialists in obstetrics; and thirdly, sending out about fifty letters to the general practitioners around Eau Claire.

This, I believe, gives us a fairly accurate knowledge of the way pituitrin is being used over the country in general.

First, I wish to give a report from the literature.

Lyle G. McNeile, M. D., Los Angeles, Cal., reviewed the literature from the beginning of the use of pituitrin in obstetrics in 1909, up to 1916, and his report was published in the Sept., 1916, number of the American Journal of Obstetrics. McNeile reports a case of ruptured uterus in his own practice, the case being handled by an externe. When the pituitrin was administered, the fetal head was well engaged below the ischial spines with complete dilatation and effacement, membranes ruptured, and position L. O. A. The pains became weak and the injection of pituitrin was advised and given, which resulted in a rupture of the uterus in five minutes. A diminished oblique diameter had not been recognized.

McNeile found in the literature 15 cases of ruptured uterus besides his own. Mundell reported 7, Herz 1, Mosher 1, Higgin 1, Zullig 5, with 13 deaths and 3 recoveries. He also found reported in the literature cases of postpartum atony of uterus, fetal asphyxia, maternal collapse, eclamptic convulsions, tetanus uteri, and premature separation of the placenta following the use of pituitrin. He says that the drug in his hands has not given

satisfactory results when used in primiparae. Also, in these cases he has noticed a larger number of fetal asphyxia. From the results in his clinic he has formulated the following conditions:

1. Complete dilatation and effacement.
2. Membranes must be ruptured.
3. Presentation must be longitudinal.
4. In cephalic presentations there should be no deflection of the head and the drug should only be used in vertex and breech presentations.
5. There should be no disproportion between the presenting part and the pelvis.
6. The presenting part should be completely engaged, that is, the greatest diameters of the presenting part should have passed below the pelvic inlet.

McNeile makes the very strong statement that "this drug has no place in normal obstetrics," but "in properly selected cases it has no equal." The dosage which he uses is 5 minims.

Madill and Allan, Dublin, Ireland, report 147 cases in which they used pituitrin.

They report their results under the following headings:

1. The effect on the uterus.
2. The effect on the fetus.
3. The indications and the contra-indications.
4. Its use in placenta previa.
5. The after results.

Aside from causing powerful contractions in the uterus, the effect on the uterus was negative, but they administered it only in the presence of proper indications.

As to the effect on the fetus, they found it not unusual for the fetal heart to drop to 120 and occasionally to 100, but except in a few cases the child was born in good condition. But under their scientific and careful methods they lost four infants as a result of the pituitrin.

Their indications and contra-indications are standard. The best time for its administration is during second stage of labor, when the cervix is fully dilated, and the head well through the brim, and secondary uterine inertia exists.

One hundred and twenty of their patients in secondary inertia got the drug during the second

*Read before the Eau Claire County Medical Society, April 30, 1917.

stage of labor. The average duration of labor before injection was 19 hours in the primiparae, and 7 hours in the multiparae. Thirteen patients got the drug for primary inertia, four primiparae and nine multiparae. The duration of labor before injection was 20 hours in the primiparae, and 13 hours in the multiparae.

They also used it for post-partem hemorrhage, and usually with some preparation of ergot.

Chronic renal and cardiac disease they include in contra-indications. They report one patient who had a bad bronchitis, but heart trouble was not suspected. They gave her 1 ccm. No pains came on, but twenty minutes later the patient suddenly collapsed, with cyanosis, labored breathing, and uncountable pulse. Forceps were applied at once and the child delivered. The patient recovered by treatment with stimulants, saline infusion, etc., but they remark that "the case emphasizes the danger of the drug in heart lesions."

They employed pituitrin in five cases of placenta previa, four lateral and one marginal. Two of the five infants were born dead.

Trapl reports 16 cases of placenta previa, 15 lateral, and 1 central, with 3 fetal deaths.

Gall had ten cases, 9 central, and 1 lateral. There were three dead infants, but no fetal heart could be heard in any of the three, and the pituitrin was given for maternal reasons.

In the most suitable cases, these observers say its administration involves some anxiety, because the fetal heart rate must be carefully and repeatedly noted after the injection.

During the last two years over 1,000 doses of pituitrin have been given at the Government Maternity Hospital to women in different stages of labor. Hingston came to the conclusion that the earliest time to give pituitrin is when the cervix is effaced. He usually gave a dose of morphine gr. $\frac{1}{4}$ with it, or began the administration of chloroform immediately after the injection. The record of these cases shows no ill effects on the child or mother. No deaths occurred in the cases where morphine or chloroform was administered with the pituitrin.

Norris would never use pituitrin without making a thorough diagnosis. He considers that healthy multiparas with relaxed birth canals offer the widest and safest fields. For inertia in the early stage of labor, the sleep of morphine, or scopolamin is preferred; but in the advanced stage of labor pituitrin will often take the place of for-

ceps. Half doses are more often to be employed than full doses.

Quigley (Rochester, N. Y.) warns against the free use of pituitrin. He says he has never given more than one c.c. and during the past two years has found $\frac{1}{2}$ c.c. quite efficient. He takes exception to the statement of Druskin, N. Y., who says in his paper: "The use of pituitrin is remarkably free from danger even when given in enormous doses."

Quigley gives as indications for the use of pituitrin:

1. Uterine Inertia, in the second stage of labor, with no obstruction to the passage.
2. Placenta Previa Lateralis, after rupture of membranes.
3. Post-partum Hemorrhage, but should be supplemented by ergot.
4. Cesarean Section, given at time of incision.
5. Late Puerperal Metrorrhagia.

Contra-indications:

1. Obstruction, and not to hurry a case making normal progress.
2. When the cervix is not dilated.
3. High blood-pressure.
4. If the fetal heart is unusually slow.

He considers uterine rupture the greatest danger in the use of pituitrin, and believes that pituitrin is used with great indiscretion and recklessness and says, "It has no place in normal cases."

Edgar had a fetal mortality of 5.7 per cent in 208 cases. In the Dresden clinic the infant mortality was 15.63 per cent.

De Lee's article which appeared in the Journal of the American Medical Association, Oct. 14, 1916, under the caption "Meddlesome Midwifery in Renaissance," should be read by every physician who does obstetrics. It is the greatest presentation of the disastrous effects of injudicious midwifery I have ever read, and I recommend that you who have not read it do so.

What Dr. De Lee says about the use of pituitary extract, I shall give you verbatim:

"Of all the meddling practices, giving pituitary extract is the most dangerous to mother and child.

Sixteen cases of rupture of the uterus produced by pituitary extract are on record. Dr. Stowe, my associate, knows of two. Others have been recounted to me, and I doubt not that many more have occurred and have never been reported. Hardly a month passes but what I learn of cases in which the baby has been lost in labor rendered pathologic by pituitary extract. I myself have observed the bad effects of pituitary extract on the child. Lacerations of the cervix and perineum are frequent results of the violently rapid delivery under the influence of the drug. I have used it a great deal. First, I gave 15 minim doses. Now I give 3 drops and on special indication only. Recently I gave 3 drops to a woman weighing 180 pounds and the resulting contraction of the uterus was so powerful and prolonged that I had to put the patient asleep with ether. This contraction lasted more than five minutes and the fetal heart tones almost ceased. Pituitary extract should not be used except in the presence of a real scientific indication, and it is governed by the same conditions as the forceps operation, that is, the head must be engaged, the cervix completely dilated, no mechanical disproportion between the child and maternal parts."

De Lee also says: "Slow, but spontaneous delivery should be the object sought, not rapid delivery." And again: "It (pituitary extract) provides the doctor and his brother gynecologist a lot of chronic sufferers, often innumerable, even after mutilating operations."

Dr. Nathaniel G. Price, Newark, N. J., writes an article very much to the point, in the *Journal of the Medical Society of New Jersey*.

Price says: "Without doubt the hasty and over zealous use of this remedy, is gaining momentum and I believe it is time to halt this abuse of an excellent agent before it has made much further headway." He continues: "Fatal asphyxia neonatorum is one of the conditions we must have in mind before administering this remedy. Within the last five years a marked increase in the number of still-births have been reported; there is no question but that some of these were due to the ever increasing use of pituitary extract."

Price closes his article with the following advice: "Never give 1 c.c. for an initial dose; rather use one-third c.c. and repeat every half hour, if necessary. Do not administer it in primary inertia; it is better to give a dose of morphine or morphine

and seopolamin and after a refreshing sleep the pains will of themselves come on with renewed vigor. Always give pituitary extract before resorting to forceps. Use it only in the second stage of labor and only when a distinct indication for its use exists. Finally stick to the 'terra firma' of established procedures, let those who have hospital protection do the fancy 'stunts' and experimentations, and be not the 'fool'—to enter 'where angels fear to tread.'"

So much for the literature on the use of pituitary extract. Now we will see what information is contained in the letters received from the specialists and the general practitioners.

The opinions of the specialists, who replied to my inquiry, are in exact accord with the literature I have reviewed. I wish I could read all these letters to you, but that would take too much time, but I do want to note some of the things contained in these letters.

The specialists were for the most part professors of obstetrics in medical colleges.

One of the specialists says that he has used pituitrin with great caution, os fully dilated, and no obstruction. His maximum dose is 8 minims, usually gives less. He gives as the dangers: Rupture of uterus, rupture of soft parts, retention of placenta, death of fetus.

Another doctor says: "We are using pituitrin chiefly to control postpartum hemorrhage. We are using less and less pituitrin during labor, chiefly because we believe it contributes to cranial hemorrhage in the new-born. We are wholly opposed to the routine use of pituitrin to augment uterine contractions." They never give more than five minims during labor.

Another uses pituitrin chiefly to control postpartum hemorrhage. He uses it some ante-partum, but only in the presence of proper indications, and begins with three drops which are later increased if necessary. Another uses pituitrin only in the second stage, and in one-half ampoule doses, repeated once if necessary, but no more.

Another says: "I limit its use personally to multiparae with no disproportion between the head and the pelvis, with a fully dilated cervix and inertia of the uterus, but even in those cases I should not employ it if I were not prepared to deliver the patient immediately with forceps in case its action proved unsatisfactory." He uses one-third ampoule for a dose.

After discussing the harm done by the unwise use of pituitrin, he says: "The cumulative bad results, however, are sufficient, in my opinion, to contraindicate its use, except in the class of cases I have mentioned."

Another says: "I believe that pituitrin is a very useful and commendable agent when used as it should be. I can see, however, the harm which may come from its indiscriminate and injudicious use. Personally, I have never seen any ill effects produced by the use of pituitrin." He continues by saying that it should not be used in the first stage of labor. In fact not until the cervix is fully dilated. For the last year and a half he has used a half c.c. instead of a whole c.c.

Another expresses the same view and says that it is better to use a few drops and repeat it than to use an unnecessarily large dose which cannot be withdrawn.

Another expresses himself in a very interesting manner and I will quote some of his letter verbatim: "I am obliged to confess that I have not learned to drive this fiery steed to my entire satisfaction. Pituitrin reminds me of a balky horse: When it takes a notion to go it goes like mad; and when it don't want to go, why there you are, like David Harum, sitting in the rain." He says that he has never seen it kick the stall down when administered in minute doses. He says that it is reported that a physician in his state caused the uterus to rupture in the case of his own wife's labor by giving pituitrin in large doses.

The remaining four or five express views in accord with the other men, so we can see that the most of the abuse of this drug is not by the specialists and masters in the practice of obstetrics, but probably by the general practitioners, as we shall see by a study of the letters received from them in answer to my inquiry.

Nearly all general practitioners who answered my inquiry showed a fairly good knowledge of the proper indications for the use of pituitrin, but the balance of the letters often betrayed the fact that they did not adhere to those indications in their practice. A few, however, were very conservative in the use of pituitrin, and only gave it in the presence of proper indications. They seem to have a keen appreciation of the possibilities of its doing harm. Therefore, credit is due these few men for their judicious use of pituitrin. One man even admitted that he gave pituitrin without accurate

knowledge of the conditions present, which he learned by an examination after the injection. Then he was surprised to discover a markedly contracted pelvis. The thing that saved the doctor more serious trouble in this case was that the pituitrin was inactive.

When I told one of the local physicians that it had been reported to me that a physician had given a dose of pituitrin without making an examination, he questioned whether any doctor would be ignorant or dare-devil enough to do such a thing. Here comes the admission on paper.

With but few exceptions, all these general practitioners use pituitrin much more extensively than any of the specialists would dare to, and in much larger doses. The most of them deny any bad results. I do not know how closely they look for lacerations, and they may not connect their fetal mortality with the use of pituitrin.

One doctor seems to use good judgment in selecting cases for the use of pituitrin, but still gives it in full ampoule doses in spite of alarming symptoms developing at times. He writes in his letter that pituitrin produces such terrific contractions of the uterus in some cases that it makes him wonder how it is going to end. Yet he cannot grasp the idea of giving smaller doses. He also reports frequent postpartum hemorrhages.

One doctor writes that he uses pituitrin very extensively, and his patients like it because the labors are over within 20 to 30 minutes, and that he will continue to use it in nearly all cases until something better is discovered.

Another doctor in a small country town with two other men located in the same town, writes that he has used pituitrin in 150 cases in the last two years, and intends to continue to use it, as it saves him a lot of time.

One doctor gave to a *primipara*, beginning in 4 or 5 hours after the onset of labor, pituitrin in the following manner:

1/3 ampoule at 11 P. M.
 1/2 ampoule at 12:15 A. M.
 1/2 ampoule at 12:50 A. M.
 1 full ampoule at 2:15 A. M.
 Baby born at 3:15 A. M.

I find that pituitrin was often given from 15 to 25 minutes apart, even in full ampoule doses.

Another case received 1/2 ampoule, then another half, then a full ampoule.

Another case received a full ampoule and in 20 minutes received another full ampoule.

Another case received one ampoule and repeated in 30 minutes with another full ampoule.

Another case was given two full ampoules.

And so I might continue with quite a number of cases, which received from two to four doses of pituitrin, and in some instances a full ampoule was injected each time.

One of our prominent physicians here told me that he saw a labor case that was having very weak pains, and the head was still floating above the pelvic inlet, and that another physician had seen the case a very short time before, and when he left the house he said to the family: "I will be back in a half hour and we will have the baby in an hour." This needs no comment.

It was often repeated to me that the indications for pituitrin were practically the same as for forceps, which is true. But there has never been a time since Smellie taught the profession how to use forceps that it has not been necessary to constantly remind the general practitioner as to the proper indications for their use. Even Smellie was too fond of using them to the extent that his pupil, the great William Hunter was so disgusted and had such contempt for such free use of the forceps that he would often display his own covered with rust as evidence that he did not use them.

It is common knowledge that forceps have been used altogether too often for no other reason than to save time or get some sleep.

When a certain doctor went to give his patient an injection of pituitrin, she asked him if that was so she could sleep. He said no, that was so *he* could sleep. That is too often the predominant motive in the use of pituitrin, as it always has been in the use of forceps.

I cannot do better than to conclude with the words of De Lee: "Let me urge that we depart not too far from our trust in the natural forces of labor, that we still uphold the policy of 'watchful expectancy' or, if you prefer, 'armed expectancy,' that we remember that the obstetrician's duty is not to make of labor a surgical operation, but to conduct it as a natural function, interfering only when called on by the necessity of preventing undue suffering, or saving fetal or maternal life."

LABORATORY METHODS AND THEIR CLINICAL APPLICATION.*

BY W. D. STOVALL, M. D.,

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The increasing importance of the laboratory as an aid in the diagnosis of disease, makes it highly important that the physicians be able to use it with facility. The greatest obstacle or impediment in the way of this is the inexact way in which a good many think of the work performed by laboratories. If all who need this service knew exactly what can be done and how it is done, conditions would be ideal and the difficulty of having specimens properly collected, preserved, and forwarded, would not be such a great handicap to the analyst, and the source of such a great deal of discredit for the laboratory by the physician.

These things, proper collection and preservation of specimens, do not bother those whose practice is largely in the hospital, and to only a small degree, those who are located where municipal laboratories are maintained. It is of vital concern to those who have to depend upon distant laboratories for their work. These men, frequently in their haste, neglect to use the precautions which they should, and when an unsatisfactory report is received, censure the laboratory and even distrust the sincerity of the workers and the validity of the report. A comprehensive understanding of what laboratories are doing and what to expect of them, and how to interpret their reports, are the determining factors in the kind of aid that the medical man may secure.

The time factor seems to be the most irritating in nearly all cases. It is thought, by no inconsiderable number, that any examination which is desired should be completed, at the latest possible moment, in a day.

The common thought is that the laboratory is dealing only with physical and chemical things, the determination of which is purely objective. The tests in the laboratory are no more purely objective than the test which clinicians make. By the understanding of this one fact, a hearty co-operation be-

*Read at the 70th Annual Meeting of the State Medical Society of Wisconsin, Oct. 4-6, 1916.

tween the physicians and the laboratory can be established, and then the two, clinical tests and chemical and bacteriological tests, will come to be considered together and no one will expect to consider them separately. The one should supplement the other.

A short description of the detail which is sometimes necessary to put a single specimen through before a diagnosis can be made will serve to emphasize these points. Both chemical and bacteriological methods are frequently necessary, neither of which can always be relied upon for a diagnosis. Bacteriological methods not only involve the use of the microscope to determine the morphology, and staining characteristics of an organism, which frequently can be done in a very few minutes, but often necessitates that more details be brought out either in the way of cultural characteristics or by animal inoculation.

In some instances, the morphology and staining characteristics of the organism are so distinctive that it is possible to identify it from these qualities alone. Such is the case with the gonococcus. A smear of pus which is properly made can be diagnosed within fifteen minutes. The stain which is used leaves the gonococcus a red color and is usually found inside the pus cell. The same is true of meningococci when they are found. The diphtheria bacillus is also diagnosed upon its morphology but requires several hours, twelve to eighteen, incubation on a special medium, before the distinctive types occur. Cultural characteristics are not so easily and readily brought out, and always require considerable more time.

It is difficult, or even impossible at times to make a diagnosis by the above methods and then it becomes necessary to inject laboratory animals with a portion of the material and wait for the development of the disease. This is most frequently the case in urine analysis or examination of spinal fluid where the tubercle bacillus is suspected, and simple stained preparations have not demonstrated them. In such cases, many weeks, three to six, pass before the test is completed. Animals are also used when by microscopic examination Negri bodies cannot be found.

So far, I have mentioned only those examinations which have for their purpose, the isolation or identification of the cause of disease. Examinations are made in which we do not seek for the cause of disease or to identify some specific organ-

ism with a malady, but in which we seek to recognize variations from the normal in the structure of tissue or composition of body fluids. Pathology deals largely with the diagnosis of neoplasms, chronic inflammation, and tissue changes in general, together with abnormal conditions of the blood, and spinal fluid. The collection of specimens for this work requires certain precautions which I will take up a little later.

The reaction of the fluid portion of the blood, and the spinal fluid with certain chemical reagents, which have been called antigens, and which are specific in certain cases, has come into the field of medicine recently. The complement fixation tests are chemical reactions which are manifest by color changes or by precipitation.

From this short description of the methods that are employed in making a diagnosis, it is obvious that the way in which a specimen is collected is a determining factor as to the results which will be obtained in the laboratory, and in fact it appears that a clinical diagnosis can often be made before the laboratory diagnosis. This is not meant to disparage the use of laboratories, but to point out what is to be expected of the laboratory.

All specimens intended for bacteriological examination should be collected in a sterile container and with sterile instruments and should be procured from the focus of the infection. It is obvious, that any contamination may be sufficient to make impossible either the cultural or animal test, and indeed, at times, may throw doubt upon the simpler method of staining and microscopic examination.

In reference to my remark that a clinical diagnosis was sometimes preferred to the laboratory, a single instance will make plain the point. When dogs show the least disposition to bite, they are usually killed immediately and the head sent to the laboratory. It is always better in such cases to confine the animal for two weeks and observe his behavior. If he has rabies he will die in a short time, leaving ample time for the administration of the treatment to the person bitten. Tissue examined from the brain of cases treated as described, it is believed, will always show Negri bodies if the animal was rabid. If, however, he is killed immediately, the examination may not demonstrate these bodies, even though the animal was rabid. The diagnosis is made still less assuring, if not impos-

sible, when the means of killing employed involves any destruction of brain tissue.

Pus from suspected cases of gonorrhoea should be collected on the surface of a glass slide, in an even thin smear. As will be shown, gonococci occur in the cells usually, and it is desirable to have the smear made so that the pus cells will be separate and distinct from each other. Very frequently we receive pus collected in a single drop on the slide. Such specimens, of course, cannot be examined. This sort of a preparation is so thick that the light will not pass through.

From a specimen from which it is desired to have a vaccine made, it is especially necessary that the material be obtained from the focus of the infection with as little of the surrounding tissue coming in contact with the collecting instrument as possible.

The contamination of a swab by allowing it to come in contact with any other part than the inflamed surfaces in suspected cases of diphtheria, often spoils the culture. The State Laboratory is now distributing to all physicians not only the swabs, but the culture tubes, for culturing swabs from both the nose and throat. These tubes are easily contaminated and no report is made upon contaminated cultures except to say that the culture was contaminated.

Next to the collection of the sample, the state of its preservation upon arrival at the laboratory and the care with which it has been sent is of importance. Every year any number of specimens are sent to us which have been so thoughtlessly shipped that when they reach us they are in such a bad state of decomposition that nothing can be done. For example, a dog's head. Often these specimens arrive so badly decomposed, being shipped uniced, that no examination can be made, and even if the microscopic examination can still be done, animal inoculation is precluded because of the putrifying organisms present.

If there are precautions to be taken to prevent contamination and thereby facilitate the examination, there are also precautions to be taken in the interest of the health of those who handle the specimen in the mails. It should be so securely packed that there will be no danger that it will be broken, and its contents spilled or its coverings completely saturated. The postal department has recognized the importance of this work and has provided for the speedy transmittance of pathological specimens through the mails, but at the same time they pre-

scribe that these specimens be packed in double containers. The State Laboratory of Hygiene supplies these containers to any physician in the state. This is important, not alone from the consideration of the mail carriers and public to whom the mail goes, but also to the physician, the family and the community. The physician, because frequently no diagnosis can be made because of carelessly packed specimen; the family and community, because an early diagnosis may be the means of preventing the further spread of the disease.

My remarks so far have aimed solely to point out to the physician practicing at a distance from a laboratory, the methods that are employed in the laboratory, so that he may know what to expect from it and how to interpret its reports. And also to call to his attention to those things with which he is already familiar, if he would only take the time to think, which he may do to avail himself of a satisfactory laboratory service.

The physician who is located in larger towns or cities where a great deal of his practice is done in the hospital, or where municipal laboratories are maintained, has the advantage of tests which the rural practitioner has not. For instance: Typhoid is a disease in which the laboratory diagnosis is often called for. This may be done either by the agglutination test or by blood culture. If the former is used, a small drop of blood may be collected on paraffin paper and sent any distance. The value of this test is somewhat depreciated, because it is seldom positive under ten days and may even be negative throughout the case. On the other hand, the blood culture affords a means of diagnosis within the first few days of the disease. The blood culture necessitates the entering of a vein with a hypodermic needle and withdrawing about 10 cc. of blood. Suitable culture media is then inoculated with this and allowed to incubate for 24 to 48 hours. In positive cases, the typhoid bacillus may be recovered from these cultures. The full value of this test cannot be realized because it is difficult to get these cultures except where the patient is close to the laboratory.

The laboratory affords still other opportunities in the way of clearing up diagnoses and in making a differentiation between clinically similar diseases, the value of which the rural physician cannot realize if he depends solely upon the bacteriologist or pathologist, but which he can easily learn to do himself. The total blood count is an example of

such a test and is often of the greatest aid. The equipment with which to do this is small and inexpensive. A counting chamber, diluting pipetts and Toison's, and acetic acid solutions, is the complete outfit. The supplement to this is the differential blood count. The preparation of the blood for this count is made upon a glass slide by smearing it evenly and thinly over its surface, and allowing to dry. They may be sent any distance to a pathologist.

We are often asked to examine a specimen of blood for both malaria and typhoid. Blood collected for a malarial examination should be prepared the same way as I have described for the differential blood count.

The malarial parasite is found inside the red blood cell and unless the smear is spread over the surface of the slide so that each blood cell may be examined, a satisfactory examination cannot be made. It is plain, therefore, that a specimen of blood collected for a Widal is not suitable for an examination to demonstrate the presence or absence of the malarial parasite.

LACTOSURIA: CASE PRESENTING UNUSUAL FEATURES—CLINICAL REPORT.

BY L. M. WARFIELD, M. D.,

MILWAUKEE.

The occasional presence of a reducing substance in the urine which might be (and really was, in this case by a hospital pathologist) mistaken for glucose is my excuse for presenting this report.

Case: Mrs. —, 31 years old, has been married two years. She became pregnant and passed through the whole period of pregnancy in excellent condition. About the 7th month there was a small amount of albumin present for two or three days. This cleared up completely under rest and temporary restriction of proteins. The blood pressure was 126 systolic, 88 diastolic. About the 8th month there was again a small amount of albumin found with an occasional granular cast. There was no sugar. The proteins were restricted again. She was then working at about half of her normal efficiency. There was very slight edema of the ankles in the evening but she felt perfectly well and had

no headache. The systolic blood pressure was never above 132 mm, up to two days before delivery, the last time it was measured during pregnancy. A small amount of albumin and a very few casts were present from the 8th month.

On March 25, 1917, at 3:15 A. M., labor pains began. She was delivered without instruments at 2:15 P. M., under about 20 minutes of nitrous-oxide-oxygen anesthesia. There were no lacerations and practically no bleeding. The baby was well formed but was limp when born, pale, and was re-uscitated with difficulty. After placental delivery she was given ergot and pituitrin. She appeared to be perfectly normal until noon of the following day, March 26, when she complained of pain in the eyes and headache. She had been without her glasses which were given to her. This apparently relieved her. She passed urine twice on March 25th and three times on the 26th. The quantity was not measured but was fairly large. The edema of legs had disappeared. Suddenly at 6:20 P. M., she complained of inability to see, could not count fingers, there was paralysis of the eye muscles, both eyes falling to the left, on which side she was lying. Her mind was dazed, she could not tell where she was. The systolic pressure was 170 mm. Diastolic not taken. Five ounces of dark colored urine containing a quantity of albumin was obtained by catheter. I saw her for the first time about 7:15 P. M. She was lying quietly in bed, there was a peculiar vacant stare to the eyes. She said she could barely see me as a blur. She answered questions rationally but the mentality was hazy. The blood pressure was 180 systolic and 140 diastolic.

While I was standing by the bed she suddenly had a violent convulsion, foaming at the mouth, becoming cyanotic and contorting all the face muscles. At once venesection was done, about 600 cc. of blood being drawn. Thirty grains of chloral were given by rectum and gr. ¼ morphine hypodermically. She was immediately taken to the hospital. She entered hospital unconscious with a pulse of 140, respirations 22 and temperature 99.6 F. She was given saline hypodermoclysis, water *ad libitum* by mouth and 30 grains bicarbonate of soda every three hours. At 1:30 A. M. she had another convulsion which was brief. There were no further convulsions.

The urine was 1025 specific gravity, acid, contained albumin and granular and hyaline casts.

The casts rapidly vanished. She was given a fat-carbohydrate diet. The baby could not be put to the breast, it died with convulsions on the 3rd day. The mother's breasts were large and full of colostrum. On the 29th it was reported that sugar was in the urine. The reduction of Fehling's solution was atypical, a yellowish uniform change. Nylander's bismuth solution was typically reduced. The urine fermented with yeast. The breasts were full of milk and painful. As she had been getting an excess of sugars it was thought probably that her tolerance had been overreached. She was starved for a day. At once the urine showed intense reaction for diacetic acid. I then carefully examined the urine myself. Although the urine reduced Fehling's solution it was not typical and was not considered to be glucose. The urine did ferment with commercial yeast but the gas did not appear until several hours after the urine and yeast had been placed in the thermostat. The blood sugar was 0.06%. However, she was starved for another 24 hours, confessedly as an experiment. The diacetic acid was now very positive. A sample was sent to Dr. C. J. Farmer of Marquette Medical School who reported as follows: "Glucose negative. Fehling's decomposed probably phosphates or acetone bodies. Phenylhydrazine, no osazone formed even on 24 hours standing. Polariscopes, rotation — 0.300 in 200 mm. tube. Probably due to betaoxybutyric acid. Acetone and diacetic acid both strongly positive."

The day the specimen was sent she was given some green vegetables. The next day a full carbohydrate diet was given and the urine rapidly cleared of acetone and diacetic acid.

The blood pressure at various times showed a gradual decline in both systolic and diastolic values.

When she left the hospital on April 8th, the urine was normal, no albumin, the blood pressure was 140 and 90. A recent note from her husband, Dr. ———, states that the blood pressure is 124 and 88, she is perfectly well, doing her own housework.

Comment: There is little to add. The features which interested me were the report of glucose, positive report by the hospital pathologist, the intense diacetic-aciduria on starvation, with no symptoms of acidosis and the rapid disappearance of the diacetic acid when carbohydrate was given. The patient is a small woman with little adipose tissue. When her carbohydrate intake was cut off there

evidently was not enough body-stored carbohydrate to burn up the fat. She was at the time secreting a great deal of milk and passing out some carbohydrate in the urine in the form of lactose. It was a typical starvation acidosis of an intense grade enhanced no doubt by the simultaneous production of excessive amounts of milk sugar which used up the available store of body carbohydrate.

The case is reported in order to call attention to a condition which might be mistaken for glycosuria and even for the acidosis of diabetes. Too much care cannot be exercised in determining the nature of a reducing body in the urine. The laboratory report in this case was positive glucose. I am sure that many cases of so-called diabetes in pregnancy are cases of mistaken diagnosis.

SPECIAL ABSTRACT.

MINERS' CONSUMPTION.

A STUDY OF 433 CASES OF THE DISEASE AMONG
ZINC MINERS IN SOUTHWESTERN MISSOURI.

BY A. J. LANZA, M. D.,

PASSED ASSISTANT SURGEON, UNITED STATES PUBLIC
HEALTH SERVICE.

The following paper is based upon a study of 433 cases of miners' consumption.

Miners and mining officials of this country have long been cognizant of the pulmonary disease incident to metal mining in hard rock; "miners' consumption" is the term that has come into general use here as "miners' phthisis" has in South Africa, and the miners themselves have always distinguished this form of consumption from the "old fashioned" or "catching" kind. The miners have also recognized the relationship between miners' consumption and rock dust, and while they have many local notions on the subject, in the main their ideas are fairly correct.

The Joplin mines are zinc and lead mines. Mining operations, drilling, blasting, etc., are therefore done in flint. This flint forms a very fine, hard, sharp, and insoluble dust, which permeates the underground atmosphere to a varying extent and which, naturally, is extremely irritating to the lungs when inhaled, causing the condition known as miners' consumption.

The term "miners' consumption" has been so widely accepted in this country that it seems best to retain it, especially as it is in itself descriptive of an occupational disease.

The morbid process is a chronic interstitial inflammation of the lungs usually most intense at the apices, but to a considerable extent found elsewhere. The lung is pervaded with minute nodules, so that the freshly cut surface feels rough and grates under the knife. Within the nodules are permanently imbedded the irritating particles. The bronchial and mediastinal glands are similarly filled with disseminated particles which have been conveyed to them by the leucocytes.

The condition of silicious dust fibrosis, once established, may persist until complete incapacity for work and death from some intercurrent malady occur, or the silicosis may be complicated by a tubercle or pyogenic infection.

All cases in which the dyspnea could be attributed, either in whole or in part, to cardiac or other nonpulmonary affections were classed as "doubtful" or "miscellaneous," and are not included in the series "Miners' consumption."

In the beginning patients are most apt to complain of pain over the front of the chest, on both sides, especially the upper half. This pain is probably due to the irritation of the finer bronchial passages, as evidenced by the peribronchial thickening seen in the X-ray plates of early cases.

Hemorrhages were rather frequent, becoming more so as the silicosis advanced. Thus, in this series, 3.3 per cent of those in the first stage had hemorrhages; in the second stage, 10.5 per cent; in the third stage, 20.5 per cent of the uncomplicated cases and 30 per cent of those with an added tubercle infection. Night sweats were uncommon.

In the later stages, with breaking down of lung tissue, the sputum was very characteristic, in fact, diagnostic, being of a marked slaty blue color and of a very tenacious consistency. This color is due to the presence of flint dust, previously inhaled and embedded in the lung tissues. In doubtful cases the appearance of this sputum is sufficient to determine a diagnosis.

Moist râles following cough, and unobscured by other sounds, as commonly heard in ordinary pulmonary tuberculosis, were hardly ever observed in these cases of silicosis.

To summarize, aside from the distinguishing feature of a progressive dyspnea on exertion, there

is little of constant value in either symptoms or signs. For diagnosis, the most important symptoms are dyspnea, associated with pain in the chest and diminished expansion; when these are present in a miner with a history of exposure to rock dust, the diagnosis of miners' consumption declares itself, even though the patient may be the picture of robust health. While slaty blue sputum, when present, is diagnostic, yet the physical examination of the patient is, in itself, insufficient without a knowledge and consideration of the occupation.

The first stage is characterized by little or no disability, with slight or moderate dyspnea on exertion; the second stage by noticeable disability, with moderate or moderately severe dyspnea; the third stage by total, or at least marked, disability, with severe or urgent dyspnea.

Patients in each of the three stages have been further subdivided into tuberculous and nontuberculous. This division is based entirely on the presence or absence of tubercle bacilli in the sputum.

Infection was uncommon in the first stage, frequent in the second stage, and still more so in the third; as the miner's consumption progresses the likelihood of both tubercle and pus infection increases, and it has been the writer's experience that practically no cases die without tubercle bacilli being present in the sputum.

Miners' consumption as observed in southwestern Missouri does not resemble, clinically, ordinary pulmonary tuberculosis; even when tubercle bacilli are present in the sputum, the lack of resemblance is plain and persists until the last few days of life, when, the patient being practically moribund, the resemblance to tuberculosis is more apparent.

Throughout there is too much dyspnea to be due to a tubercle infection and still permit the patient, though free from other symptoms, to do a hard day's work; also, were the dyspnea, cough, and sputum due to a tubercle infection, we would expect a rise of temperature in the afternoon, but a temperature record of such cases, still working, failed to show any elevation. The result of roentgenograms is set forth separately.

Occasionally there was observed a patient with evidence of silicosis who also had tubercle bacilli in his sputum and who, nevertheless, looked well and felt well and was able to work on from month to

month without any noticeable progress of his disease.

Tubercle infection is secondary in producing disability, though it may hasten death, the silicosis being the primary factor and sufficient to produce these results without the aid of infection.

Attention is called to the average number of years' work in sheet-ground: For the first stage group 5.3 years, for the second stage 6.7, and for the third stage group 8 and 7.7, respectively, while the average for the well man was 3.9. Five years' steady work with exposure to flint dust is fairly certain to find the miner in at least the first stage of silicosis; the difference in the degree of dustiness in various mines and the steadiness of work will largely account for individual differences in duration of disease.

While hard work at an early age necessarily often undermines the vitality, the percentage under 21 among the well men would indicate that immaturity has little to do with the incidence of miners' consumption, though contributing to the rapidity with which these cases break down.

We may safely conclude, then, that the average case of miners' consumption dies within 10 years of beginning exposure to silicious dust.

As the writer has had occasion to point out elsewhere, miners' consumption should be treated with the same hygienic precautions as is pulmonary tuberculosis, as there is no telling in any given case when infection may take place and tubercle bacilli appear in the sputum.

CONCLUSIONS.

1. Miners' consumption is an important occupational disease, widely prevalent among the hard-rock miners of the Joplin district, affecting probably 30 to 35 per cent of them.

2. Miners' consumption is essentially a pneumoconiosis, due to the inhalation of silicious rock dust, and resulting in a fibrosis, with loss of function.

3. The disability and other effects of miners' consumption are due primarily to silicosis, infection being usually a secondary, and often a terminal, process.

4. Infection, both tuberculous and pyogenic, is common in miners' consumption, the tendency to infection increasing as the disease progresses.

5. The incidence of tubercle infection in miners' consumption is a menace to the public health,

affording an unusual opportunity for the spread of tuberculosis.

6. Aside from the hygienic supervision of working conditions underground, education of the miner against the spread of infection and supervision of miners' children, especially those of consumptive parents, are matters of vital importance.

ANTITOXIN FOR GAS GANGRENE.

The gas-producing bacilli, now commonly spoken of as *B. welchii*, occur in a variety of lesions, but their chief hold on our interest lies in their connection with gas gangrene, that dreadful complication of wounds, especially those received in modern warfare. The effects of gas bacilli have been explained in various ways, most often as due to some form of intoxication, either from the products of the decomposition of infected tissues or through the generation of fatty acids as well as in other ways, but it has not been thought that the effects were dependent on true bacterial toxins. Bull and Pritchett, however, report highly interesting experiments the results of which indicate that, under suitable conditions, cultures of gas bacilli produce true toxins to which their pathogenic effects, at least in certain animals may be ascribed. There are produced at least two distinct toxins, one of which is hemolytic while the other causes local edema and necrosis and probably also a more general toxic action.

The destructive action on blood was shown most definitely by the intravenous injection of Berkefeld filtrates of cultures of gas bacilli in plain broth, to which sterile pigeon or rabbit muscle had been added; and the local destructive effects were produced best by subcutaneous and intramuscular injections of such filtrates. Indeed, the lesions in the breast muscles of the pigeon, produced by injection of the filtrates, resembled closely the effects caused in animals and in human beings by actual infection with the bacilli. These actions of filtrates of gas bacilli cannot be neutralized with sodium hydroxid, and hence are not caused by butyric and other acids; they are materially reduced by heating filtrates of 62 C., and are completely removed at 70 C. for thirty minutes. Repeated injections of filtrates in pigeons and rabbits result in a true active immunity, and the blood of immunized rabbits neutralized the toxic actions of the filtrate not only in the test tube, so far as the hemolytic action is concerned, but also in the living animal with respect to the locally injurious actions as well as the destruction of blood corpuscles, and it is still more significant that in pigeons such antitoxic serum proved to be protective and curative against actual infection with gas bacilli, both in the spore and in the vegetative stages. Bull and Pritchett also find that antitoxic rabbit blood and toxic filtrates of gas bacilli neutralize each other perfectly in multiples of single doses, thus fulfilling the law of multiple proportions as established with reference to the toxins and antitoxins of *B. diphtheriae* and *B. tetani*.

It appears, then that gas bacilli may produce true toxins, which cause the principal pathogenic effects seen in gas infections and which can be neutralized by antitoxin, the latter being also protective and curative against gas bacillus infection in pigeons—a discovery that would seem to hold out great promise for the development of a specific treatment of human infection with gas bacilli. *Jour. Amer. Med. Assn.*, July 7, 1917.

BOOK REVIEWS

DISEASES OF CHILDREN. A manual for students and practitioners. By George M. Tuttle, M. D., Clinical Professor of Pediatrics, Washington University Medical School, etc., and Phelps G. Hurford, M. D., Assistant in Pediatrics, Washington University Medical School, etc., Lea and Febiger, Publishers. Philadelphia and New York, 1917. Price \$3.50.

While brevity is a virtue in a medical manual, its advantages in a manual on pediatrics are very apt to be embarrassed by the methods it must utilize. Disease processes in infancy and childhood are unfortunately so varied that abbreviated descriptions may not only delete essentials but may be particularly deceptive to students for whom the book is intended.

The clinical pictures of some of the commoner diseases of infancy as given in this manual lack the proper emphasis of the particular points that are distinctive of these diseases in childhood. The symptomatology of lobar pneumonia might as well be placed in a volume on general medicine by substituting "the patient" for "the child". While the authors dwell on "pain in the side of the chest", and "rusty sputum", so rarely seen in childhood; referred abdominal pain is overlooked. Such signs as the expiratory grunt, rapid respiration and dilatation of the alae nasi should be given more emphasis.

The description of pyelocystitis likewise lacks the distinctive description of the infantile type, which is most frequently seen. "Painful urination and tenesmus" are not "usually frequent" in pyelocystitis, nor is pyelitis in infancy "oftenest caused" by renal calculus.

Several other statements should be corrected. Pylorospasm is *not* more frequent in artificially fed infants. Lymphatic leukemia is *not* more rare than myelogenous in childhood.

The determination of the carbon dioxide tension of the blood is not mentioned as a diagnostic measure in acidosis. Neither is the use of the Roentgen-ray as an aid in diagnosis given in either pericardial effusion or enlarged thymus.

The authors have included the advances made by recent literature and offer admirable descriptions of rickets, spasmophilia, exudative diathesis, congenital syphilis, hydrocephalus and other conditions.

The details regarding feeding in infancy are excellent. Particularly noteworthy is the enthusiastic advocacy of breast feeding, instructions which cannot be repeated too frequently nor emphasized too strongly.

Until recently, pediatric text books have dealt in a very vague sort of way, with the subject of infant feeding in particular disturbances of digestion. The general instructions offered were frequently analogous to the military order to "Seek the enemy and destroy him". This led the despairing doctor all too frequently to utilize as many different food-compounds as the "literature" received in his daily mail advised. The results were occasionally in direct proportion to the number of different foods given. The present authors give detailed instructions on feeding for the various food disturbances. The best known methods are given with the necessary amount of conciseness and emphasis. A. B. S.

HANDBOOK OF MASSAGE FOR BEGINNERS. By L. L. Despard, member and examiner, incorporated society of trained masseuses. Henry Froude, Oxford University Press, Hodder & Stoughton, Warwick Square, E. C. London, 1915. Price \$2.00.

This small book was written with a view of more widely disseminating knowledge of massage so that the wrecks of war could have the benefit of massage. The author evidently is well informed in his subject.

The text, while somewhat terse, reads well and the various descriptions of the movements in massage are easily understood.

It is a very timely contribution to a much-neglected field of therapy. We superior medical men have allowed this valuable therapeutic measure to be commercialized by quacks and irregulars under the names of Osteopathy, Chiropractic, Mechano-therapy, etc., *ad nauseam*. A little more attention on our part to simple manipulation and massage would not do us any harm and might aid us in saving our patient from the various theorists. We think that a perusal of this little book will help any physician.

CANCER, ITS CAUSE AND TREATMENT. By L. Duncan Bulkley, A. M., M. D., senior physician to the New York Skin and Cancer Hospital, etc., 2nd volume. Paul B. Hoeber, publisher, New York, 1917. Price, \$1.50.

In view of the alarmingly high mortality statistics from cancer, and the increase of mortality percentage under the surgical treatment of this disease, it is little wonder that some investigators have looked for some method of treatment which offers a better prognosis. It is recognized that surgery at best only removes the local manifestations of the disordered metabolism, and all investigations and research work, which look toward the ultimate cause of cancerous conditions, cannot be too highly respected. Dr. Bulkley, after years of work on the cancer problem, has come to the conclusion that cancers are but local manifestations of general metabolic disorders arising in many cases from errors of diet especially high protein intake.

Whether or not we agree with Dr. Bulkley in this explanation of cancer, his book is interesting in that a comparatively new and plausible explanation is set forth for a disease whose cause we know not.

B. B. R.

THE WISCONSIN MEDICAL JOURNAL

OFFICIAL PUBLICATION OF THE STATE MEDICAL SOCIETY OF WISCONSIN

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79 Wisconsin Street, Milwaukee

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141 Wisconsin Street, Milwaukee

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Annual Subscription - - - Two Dollars Single Copies - - - Twenty-five Cents

Address all business communications to THE WISCONSIN MEDICAL JOURNAL, 504 Goldsmith Building, Milwaukee

Vol. XVI.

July, 1917

No. 2

EDITORIALS

PHYSICIANS! ATTENTION!!

THE United States of America is at war with the greatest military power the world has ever known. It is a death grapple for the survival of the principles of democracy. At no time have medical men ever failed to do their duty. In fact in the slang phraseology of the day, "Duty is their middle name." We are called upon to furnish 20,000 physicians. At the present time there are less than 500 physicians in the regular Medical Army Corps, about 2,500 in the Medical Reserve Corps and about 800 in the Militia, a total of about 3,800 physicians, *and we must have 20,000!*

The country is watching Wisconsin, slurs and jibes have been cast on the patriotism of her citizens. Let it not be said that Wisconsin physicians failed to do their part in this crisis. If you are under 55 years of age and have not sent in your application yet, tear out the application in last month's number of this Journal, fill it out and mail it to Dr. Rock Sleyser, Waupun.

BIRTH REGISTRATION.

LAST month there was a registration of all men who were twenty-one years of age. Further, many men were just twenty-one or just under twenty-one. Suppose a man did not know just how old he was, he was not certain of his birthday, how was he to find the answers? Naturally

he would go to the Registration Bureau of the local Health Department. But there he might find to his dismay that there was no record of his birth. The physician who attended at his birth had not bothered about the registration of his birth either in a community where there were no Birth Registration regulations or where they were present and not enforced. Such a dilemma may happen to any one except to those in a few communities. This state of affairs should not exist in a civilized community. The need of Birth Registration is urgent. In most cities and towns there are regulations, but the enforcement is so lax that only a certain percentage of those born are registered. Physicians can do much to remedy this condition. If every doctor who attended a labor case was scrupulous about the registration of the birth, there would at once be the sure foundation for future health work. Until we have correct birth and correct death certificates and universal registration, we cannot accomplish a tithe of what we should accomplish in the study and prevention of disease.

The National Committee for Mental Hygiene has created a subcommittee on furnishing hospital units for nervous and mental disorders to the United States Government, the project having been approved by Surgeon General W. C. Gorgas of the U. S. Army.

This subcommittee, of which Dr. Pearce Bailey of New York is chairman, is authorized to secure the services of alienists and neurologists to be commissioned in the Officers' Reserve Corps, Medical Section, and to serve in the neuro-psychiatric units which are to be attached to the base and other hos-

pitals of the military services of the United States. Further information will be given, and application forms sent to physicians qualified in this branch of medicine, on application by letter or in person to The National Committee for Mental Hygiene, 50 Union Square, New York City.

ABUSE OF PITUITRIN.

WE desire to call attention to an article in this issue by Dr. Tupper. We hope this message will reach the physicians and be digested by them. Pituitrin is one of those powerful drugs which have influences for good and for evil. Because a doctor has used it many times and has not had a maternal death is no argument for the indiscriminate use of the drug. What is put in the tissues by a hypodermic can not be recalled. The deed is done. Dr. Tupper mentions a few cases of rupture of the uterus and says that no doubt there are many more which do not get into the literature. There is no doubt that he is correct. We know of one case which occurred at a large hospital in this vicinity. The diagnosis of ruptured uterus was confined at autopsy.

Pituitrin is still comparatively new and has been so lauded that there is no wonder that its use is so widespread. The large commercial firms have pushed it through their literature and detail men. Let us hope that a saner attitude towards its use is appearing and that the abuse of pituitrin, so dangerous to both mother and child, is dying out never to return.

TRAINING OF ATTENDANTS FOR THE SICK.

WE are of the opinion that the majority of the physicians and public of the State feel reasonably sure that every year it becomes more and more difficult to supply the demand for trained nurses. Further, the call comes in from all sides for women to take care of patients for a smaller fee than is charged by the regular trained nurse. Attention has frequently been called to the anomaly of our social state, that the paupers and the wealthy receive the best medical care and best nursing care as well. For the great mass of people there are few hospital beds and but few nurses. The average man cannot afford to pay a trained

nurse's fee for long. And when it is necessary to have two nurses, Mr. Man is pushed against the wall financially.

Wisconsin has been face to face with the lack of nurses for some time. It is hard to believe that Wisconsin is unique in that situation. Certainly with the Red Cross taking many nurses for war service, the civil population will be left to shift for itself. That this possibly is recognized by the General Medical Board of the Council of National Defense is apparent from a paragraph in a recent series of resolutions: "Recognizing the increasing need for trained nurses and the inadequate number available for military and home service, we recommend especially efforts to enlist graduates of colleges and high schools and other suitable candidates for hospital training courses." In this threatened emergency the State Council of Defense has accepted a plan from the Governor, who is most interested in all problems relating to the care of the sick, of training intensively groups of young women for six months in hospitals of recognized standing throughout the state. Young women who are between 21 and 35 years of age, and have had a high school education or better, will be given preference.

This training has nothing to do with war service; has no connection with the Red Cross service; is designed solely for home service to meet the certain needs of the people of the state. The first unit is now in training at the Milwaukee County Hospital. This is a group of thirty young women. Later there will be units established at several other hospitals in the state. The number in a unit will be twenty as a maximum in all the other hospitals. The first month is a probation period. The class will then be selected and will go on for five more months. At the end of that time successful candidates will be required to sign an agreement to serve in the State for a period of two years or such part as the emergency (war) requires, but any girl may elect to continue her training for a regular nurse and she will receive some credit for the six months.

The young women will be at no expense while in training. They will also be paid \$10 a month during the six months' course which will enable them to buy their books and uniforms. They are not expected to charge but \$10 a week for their services as long as the war lasts. This is a war

measure and has life only during the war. It is probably not the very best means to meet a coming acute situation, but it was born with much mental travail and deserves to be given a place to live and to work out its destiny.

So many young women have thought that this was a short cut to nursing. It is most emphatically not. The young women who will take this course of six months will, it is hoped, be more capable than the average practical nurse, but they can never hope to take the place of the regular trained nurse who goes through three years of strenuous work in order to fit herself for her profession.

This, as a matter of fact, is regarded as a chance for some young women to do patriotic duty and at the same time to broaden and humanize themselves by service to their fellow beings.

Fear has been expressed that this course will lower the standards of the trained nurse, that no control can be exercised over the young women when they get into the field, and that the public will confuse them with trained nurses. As to the first, we do not agree with the fear. On the contrary, we confidently expect that the presence of these young women will have a stimulating effect upon the students in regular training and spur them to greater effort. Further, the competition in the field will probably separate the nurse trained in a good hospital from the one trained in a small, illy-equipped hospital and force the poorer training school out of business or make them bolster up their course.

The public is accustomed to the trained nurse, it admires and loves her. It is for the nurse herself to hold her place in the eyes of the public against the possible usurper.

NOTE—Further information in regard to this course can be obtained from the Editor, 79 Wisconsin Street, Milwaukee, Wis.

BRIEFLY STATED.

The Medical Departments of the Government are responsible for the examination of the recruits, the hygiene of camps and for the care of the wounded.

The Surgeon Generals as yet have not been given full authority and the ample means to meet this responsibility.

The President as Commander-in-chief can give the Surgeon Generals full authority. Congress

can give them the ample means. But up to the present time neither the President nor Congress has been able to give them a sufficient number of men, from the Medical Profession, as it is a volunteer service.

If the President gives the Medical Departments the authority and Congress gives them the means, it is up to the Medical Profession of the Country to furnish the men.—*Joseph C. Bloodgood.*

TO THE MEMBERS OF THE AMERICAN MEDICAL EDITORS' ASSOCIATION.

Your committee appointed June 4th, to consider appropriate ways and means to aid in recruiting the personnel of the medical reserve corps of the United States military forces, desires to present the following resolutions and emphatically urge their immediate adoption.

Whereas, The need of Medical Reserve Officers for both the Army and Navy is the paramount question of the day, therefore be it

Resolved, That (1) the members of this Association pledge themselves to publish prominently at least three times within the ensuing three months, a copy of the official personal application blank with an explanatory comment on the proper procedure to be employed in transmitting the same to the Surgeon General's office.

(2) That all medical journals of this country be urged to present editorially the needs of the military services in this crisis and the immediate necessity for securing the full complement of medical officers for the same.

(3) That this committee be continued in office after this meeting and be empowered to expend for carrying out the provisions of this resolution a sum not to exceed two hundred and fifty dollars.

(4) That a copy of these resolutions be forwarded to the Surgeon Generals of the Army and Navy and that the Association of American Medical Editors in convention assembled herewith pledges its hearty and unstinted support of all measures designed for the development of the medical forces in this hour of need.

Seale Harris, M. D., Sec'y Southern Medical Society, Editor of The Southern Medical Journal.

T. L. Stedman, M. D., New York. Editor of the Medical Record.

H. E. Lewis, M. D., New York. Editor, American Medicine.

D. S. Fairchild, Clinton, Iowa. Editor, Iowa State Journal Medicine.

G. W. Kosmak, M. D., N. Y. President, American Medical Editors' Association, Co-Editor, American Journal Obstetrics.

Robert M. Green, M. D., Boston. Editor, Boston Medical & Surgical Journal.

J. MacDonald, Jr., M. D. Secretary American Medical Editors' Association. Mgr. Editor, American Journal of Surgery.

BOOK REVIEWS

THE INTERNAL SECRETIONS, their physiology and application to pathology by E. Gley, M. D., member of the Academy of Medicine of Paris; Professor of Physiology in the College of France, etc. Translated from the French and edited by Maurice Fishberg, M. D., clinical professor of Medicine, New York University and Bellevue Hospital Medical College; Attending physician, Montefiore Home and Hospital for Chronic Diseases. Paul B. Hoeber, publishers, New York, 1917. Price, \$2.00.

If one wished to know how little real knowledge we have concerning the internal secretions and how poorly connected and explained are many isolated facts concerning the physiology of the endocrine glands, he cannot do better than read this small book. This is a free translation from the French and is a clear but very brief exposition of what is known concerning the physiology of the glands of internal secretion. Very many unsettled questions concerning their physiology, the consideration of hormones, and a short description of vagotonia are included. The reviewer knows of no better book upon the physiology of the endocrine glands generally and the limit of our knowledge concerning them is very clearly outlined.

B. B. R.

BONE-GRAFT SURGERY. By Fred H. Albee, M. D., F. A. C. S., Professor of Orthopedic Surgery at the New York Post-Graduate Medical School and the University of Vermont. Octavo volume of 417 pages with 332 illustrations, 3 of them in colors. Cloth, \$6.00 net; Half Morocco \$7.50 net. W. B. Saunders Company, Philadelphia and London, 1915.

This author's book on Bone-Graft Surgery has been awaited eagerly by all who have seen or read of his work. Sutures, wires, plates and splints have in turn raised and dashed our hopes as effective agents. There is no question that the bone-graft has already proved its ability to deliver. This book is beautifully clear in its exposition on bone-graft work and excites our admiration by its completeness. Every surgical and mechanical procedure is based on sound scientific principles, and if Dr. Albee receives half the credit from the cripples of the future that is due him for his influence on bone surgery, he will need no further monument.

There is no other book on the bone-graft and there will not be another needed for some time. The surgeon who has not enjoyed reading this book has a treat in store, and those who have read it have found a good friend.

E. A. S.

HANDBOOK OF SUGGESTIVE THERAPEUTICS APPLIED HYPNOTISM PSYCHIC SCIENCE. A manual of practical psychotherapy, designed especially for the practitioner of Medicine, Surgery and Dentistry, by Henry S. Munro, M. D., Omaha, Nebraska. Fourth Edition, revised and enlarged. C. V. Mosby Company, Publishers, St. Louis, 1917. Price \$5.00.

This is by no means a book which should be purchased by the psychiatrist, neurologist or alienist, or by anyone well-versed in psychotherapeutic methods and psychoanalysis. It is very simply written in a conversational

style and the reading of this book is almost comparable to attendance upon a hypnotic seance.

The methods of introducing hypnosis are given in more detail than is usual in books of this nature, and for the general practitioner and the physician to whom psychoanalysis and psychotherapy are still hazy and indefinite in their laws and applications, this book may be of a good deal of value in bringing these subjects to their attention in a very simple way.

Since we already have a number of very excellent and scientifically written books upon psychotherapy, it appears to the reviewer that the sphere of usefulness of this book upon suggestion is more or less limited.

DISEASES OF THE STOMACH, INTESTINES, AND PANCREAS, by Robert Coleman Kemp, M. D., Professor of Gastro-intestinal diseases at the Fordham University Medical School. Third edition, revised and enlarged. Octavo of 1096 pages, with 438 illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, \$7.00 net; Half Morocco, \$8.50 net.

The third edition of Dr. Kemp's book warrants careful attention from the medical profession. To many, Kemp is very well and favorably known and his book requires no extended review. For those who are not acquainted with this book, attention should be called to its worth. If there is any book published upon this subject in the English language which is better balanced, clearer in description and of more practical value, it is unknown to the reviewer. In every way it is an excellent book upon the subjects considered.

The Subject matter may be divided into three parts:

1. Disorders and diseases of the stomach; 2. of the intestines; 3. of the pancreas. In the careful consideration of cancer of the stomach all of the newer valuable tests are described and throughout the book an adequate discussion of the use of the X-ray in the diagnosis of diseases of the gastro-intestinal tract is given. The treatment of the various diseases and disorders is detailed, very clearly described, and extremely practical. There is a very useful and interesting chapter on stomach functions in diseases of other organs.

Among the intestinal disorders which receive consideration are intestinal catarrh, chronic intestinal stasis, constipation and diarrhoea, gastro-enteritis, dysentery, appendicitis, diverticulitis and intestinal obstruction. The last hundred pages are given up to diseases of the pancreas: Acute and chronic pancreatitis, fat necrosis, calculi, cysts, and neoplasms. Reserving special notice is the very excellent chapter upon nervous affections of the stomach: Gastralgia, hypermotility, peristaltic unrest of Kussmaul, pyloric spasm, cardio-spasm, nervous vomiting, periodic vomiting and neurasthenia gastrica.

The very important and new subject of vagotonia and sympatheticotonia receives only a very few pages but this work is only in its infancy. This book is primarily of practical usefulness and is a book which will be very often referred to for the diagnosis and treatment of the diseases described therein.

B. B. R.

THE STATE MEDICAL SOCIETY OF WISCONSIN

ORGANIZED 1841

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NEXT ANNUAL SESSION, MILWAUKEE, OCTOBER, 1917

The Wisconsin Medical Journal, Official Publication

LIST OF EXECUTIVE OFFICERS OF COUNTY MEDICAL SOCIETIES.

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Barron-Polk-Washburn-Sawyer-Burnett	H. M. Coleman, Barron	I. G. Babcock, Cumberland.
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Winnebago	J. W. Lockhart, Oshkosh	E. H. Hunt, Oshkosh.
Wood	Ed. Hougen, Grand Rapids	W. M. Ruckle, Grand Rapids.

SOCIETY PROCEEDINGS

DANE COUNTY MEDICAL SOCIETY

Dane County Medical Society held a regular meeting on June 12, 1917, at Mendota, at the State Hospital for the Insane. Luncheon was served at 6:30. The following was the program: Infantile Cerebral Diplegia, Dr. Mary Sauthoff, Mendota; Involution Melancholia, Dr. M. K. Green, Mendota; Presentation of a Case of Paranoid Condition, Dr. August Sauthoff, Mendota.

GRANT COUNTY

A meeting of Grant County Medical Society was held on June 8th at Fennimore. Dr. R. H. Jackson of Madison read a paper on "The Value of the X-Ray in the Diagnosis and Treatment of Fractures."

ROCK COUNTY

The annual banquet of Rock County Medical Society was held on Tuesday, May 29th, at the Cargill Memorial Methodist Church, Janesville. Dr. H. M. Richter, Chicago, who recently returned from a military hospital in Germany told of his experiences, illustrating his talk with views.

WAUKESHA COUNTY

Waukesha County Medical Society held its regular meeting on June 15, at the home of Dr. H. A. Peters, Oconomowoc. Eighteen members were present. The business meeting was devoted chiefly to a general discussion of the work of the profession along military lines, and a paper was read by Dr. W. S. Wing. The meeting was followed by a dinner at the Peters home. The Society voted to purchase a Liberty Loan bond of \$100.00.

At the recent meeting of the Oshkosh Medical Club it was voted to give \$50.00 to the Red Cross Society in place of indulging in the usual annual banquet. Plans were discussed for the winter meetings, expecting to make the society more active and beneficiary. Drs. Steele, Allen, and Ozanne were elected as program committee. Dr. W. N. Linn was re-elected secretary-treasurer.

NEWS ITEMS AND PERSONALS.

DR. ARTHUR T. HOLBROOK, Milwaukee, recently underwent a serious operation. He is convalescing at St. Mary's Hospital, Milwaukee.

DR. F. A. RICE, Delavan, who has been seriously ill with rheumatism, is convalescent.

DR. F. C. WERNER, who has been deputy revenue collector under the Harrison Drug Law since April,

1915, has resigned his position, and resumed private practice at Watertown.

DR. A. J. LOUGHNAN, has disposed of his practice at Winneconne, and taken up his work as house physician at Trinity Hospital, Milwaukee.

Dr. Oscar Lotz, Milwaukee; Dr. F. C. Haney, Watertown; Dr. F. T. Clark, Waupun; and Dr. Edward Murphy, Eau Claire have been named by Gov. Phillip as members of the State Board of Medical Examiners for terms ending July 1, 1921.

DR. ARTHUR W. ROGERS, Superintendent Oconomowoc Health Resort, was elected president, for the ensuing year, of the Chicago Neurological Society, at its May meeting.

DR. EDWARD EVANS, La Crosse, has been elected a non-resident fellow of McGill University, Montreal.

DR. WILLIBALD J. WEHLE, West Bend, dislocated his right shoulder in an automobile accident, June 3rd.

DR. F. J. ANTOINE, Prairie du Chien, is defendant in a \$15,000 malpractice suit, filed against him by Michael Aspenson, who charges Dr. Antoine with negligence in the use of the X-ray. Plaintiff claims that his leg was so severely burned that it is permanently crippled.

DR. W. G. DOERN, Milwaukee, is being sued by Clarence L. Van Wagner. Van Wagner alleges that Dr. Doern prescribed a medicine which turned his skin blue. He asserts that his appearance is now shocking and asks damages to the extent of \$20,000.

DR. W. T. CLARK, Ft. Atkinson, is now stationed at Fort Riley, Kansas.

DR. ROBERT BOWEN has returned to Oshkosh after a year's absence at Graudenz, Prussia, where he served in a military hospital.

DR. A. H. FRANKEL, Milwaukee, who for the past several months has been detailed as assistant examining surgeon for the navy, has been ordered to report at the Great Lakes Naval Training Station.

DR. H. A. KEENAN, Stoughton, has received a lieutenant's commission in the Medical Officers' Reserve Corps, U. S. A.

DR. GILBERT E. SEAMAN, Milwaukee, has tendered his resignation to Gov. Phillip, as a member of the State Board of Education. Dr. Seaman resigned this position owing to military duties.

DR. J. R. LONGLEY, Fond du Lac, is in training at Ft. Benjamin Harrison, Ind.

DR. A. J. PULLEN, state senator and member U. S. Medical Reserve Corps, has been notified that he will be assigned to a base hospital in France.

DR. E. L. PARMENTER, Mondovi and DR. J. M. CONLEY, Oshkosh, are stationed at Ft. Riley, Kansas, for a three months' course of training.

DR. C. L. ANDREWS, Waupaca, has been commissioned captain of the Waupaca Company, which has been mustered into the Fourth Wisconsin Regiment.

DR. GEORGE C. RUILAND, Milwaukee, has been authorized by the Government to conduct physical examinations of men desiring to enlist in the United States ambulance service in France.

DR. M. R. WILKINSON, Oconomowoc and DR. GEORGE SENN, Depere, are at Ft. Benjamin Harrison, Ind. They hold commissions as First Lieutenants, Medical Officers' Reserve Corps.

DR. FRANK W. VAN KIRK, Janesville, is commissioned a captain and Dr. J. R. Randall, Milwaukee, a lieutenant in the Medical Officers' Reserve Corps.

A second field hospital for Wisconsin is being organized in Madison, and is in charge of Lieut. W. F. Lorenz.

Physicians of Philadelphia plan a reclamation camp to treat men rejected for service in the army or navy because of minor physical defects, and return them for a continuance of their examination. The war department will finance the project.

DR. J. D. GLENNON, head of the United States Public Health Service, in a letter recently received,

is seeking detailed information as to whether Milwaukee will be able to supply buildings for temporary hospitals or sites for such buildings, for war purposes.

The new hospital and deaconess' home at Milwaukee of the Wisconsin District of the Evangelical Synods of North America, was dedicated on June 11th. The buildings were erected at a cost of \$90,000. The old hospital will be used as a home for the nurses. The new structure consists of four stories, and will accommodate sixty patients.

The Wisconsin Legislature recently changed the name of the State Criminal Insane Hospital at Waupun to the Central State Hospital. This action was taken because not over 40% of the inmates have criminal records, and the old name branded all inmates with the term criminal.

Two thousand dollars will now be received annually by the State Laboratories in Wisconsin instead of the five hundred formerly apportioned to research work. This increase is due to the efforts of Senator A. J. Pullen of Fond du Lac, who introduced the bill making this increase, through the finance committee. The bill passed both houses without trouble.

The State Legislature has voted \$50,000 for building an infirmary at the University of Wisconsin.

Necah will have a summer camp for tuberculous children, for which the common council of that city made an appropriation. The camp is in charge of the school nurse.

Every county in the state of New York, having a population of 35,000 or more, not having a tuberculosis hospital approved by the state commissioner of health, must provide one on or before July, 1918, under a bill passed by the last legislature, which has received the approval of Gov. Whitman.

Milwaukee lost the free dispensaries provided for in the will of the late Antoinette Keenan, when a jury recently found that Mrs. Keenan was not of sound mind when she made her will, leaving the bulk of her \$450,000 estate in trust for the main-

tenance of dispensaries in Milwaukee. The same finding was returned by the jury in connection with two codicils to the will.

The State Industrial Commission has announced awards in the seven Eau Claire typhoid fever cases, totaling \$5,356.83. These cases go back to 1914, when thirteen workmen employed by the Dells Lumber Company, and two men employed by the Pioneer Furniture Company contracted typhoid fever, two dying. In accordance with the decision of the supreme Court, the industrial commission in these cases holds that typhoid fever contracted by an employe as the result of drinking polluted water furnished by an employer is a personal injury accidentally sustained.

An official report of the 1916 epidemic of infantile paralysis made public by the department of health shows that from June to November, of that year there were 6,000 deaths from the disease in the United States and more than 27,000 cases, New York being the greatest sufferer.

The Spence-McCord Drug Company of La Crosse paid a fine of \$300 in Judge Landis Federal Court recently for failing to properly label some cough medicine. The firm declares that the matter has been rectified and admitted that it was a technical error of which they knew nothing at the time.

The American Medical Association at its National Convention in New York adopted resolutions declaring alcohol to be neither a food nor a stimulant. The Connecticut Manufacturers' Association, representing over 200 of the leading manufacturers of that state passed a resolution favoring complete War Prohibition by a vote of 176 to 1. The National Conference of Charities and Corrections, at its national convention in New York, violated its custom of passing no resolution on a controverted subject, and passed the following resolution: "In the present great national emergency, when the full strength of the nation, physical, mental and moral is needed as never before, and when the conservation of food grain is of crucial importance we favor the absolute prohibition of the manufacture, importation and sale of intoxicating beverages during the war, and for at least one year thereafter."

The Municipal Civil Service Commission of New York City announces an examination of Chief

Medical Examiner. The incumbent of this position will be in charge of the office of the Chief Medical Examiner of the City of New York, and will perform the duties heretofore performed by the coroners of the various boroughs. Candidates must have a degree from an approved institution, and present evidence of having done, in an official connection, at least ten years work in the pathological laboratory of a recognized medical school, hospital, asylum or public morgue, or in a corresponding official capacity. He must have performed at least 1,000 autopsies. Full particulars and applications may be obtained at room 1400 Municipal Building, New York City. Examinations are open to all citizens of the United States, but persons accepting appointments must thereafter reside in the State of New York. The compensation is \$7,500 annually for full time service.

MARRIAGES

Dr. John A. Roberts, Waukesha and Miss Fredericka Wehrman, Madison, at Chicago recently.

Dr. Walter C. Roth, Wauwatosa and Miss Agnes Elizabeth Fritchen, Franksville, June 27th.

Dr. William T. Kradwell and Miss Mary Pitzka, both of Wauwatosa, on June 23rd.

Dr. J. J. Rehorst and Miss Edith Potter, both of Fond du Lac, on June 14th.

REMOVALS

Dr. R. Kaysen, Watertown to Oconomowoc.

Dr. J. T. Klein, Wauwatosa to Columbus.

Dr. E. J. Helguson, New Galrus to Evansville.

Dr. E. Hoffman, Windsor to Sharon.

Dr. B. Kunny, Cylon to Baldwin.

OBITUARY.

DR. SAMUEL W. FRENCH.

Dr. Samuel W. French was born in Derby Line, Vermont, near the Canadian border on July, 13th, 1850, and died of angina pectoris June 30, 1917,

at his home in Milwaukee. His early boyhood was spent in Boston where he attended the Boston Latin School. After his graduation there he entered Harvard and received his A. B. in 1873. He was a member of the Pi Eta Society at Harvard and took an active part in the amateur theatrical performances of this society. After a year in Europe he returned to Boston and entered the Harvard Medical School, graduating in 1878. After graduation Dr. French served for two years as an interne in the Boston City Hospital. In 1880, when he had finished this term of service, he came to Milwaukee and entered upon the practice of medicine in which he was actively engaged until the time of his death.

Dr. French was deeply interested in his profession and its organized activities and was a member of the Milwaukee Medical Society, the Medical Society of Milwaukee County, the State Medical Society of Wisconsin, and the American Medical Association.

In 1891-1892 he was the president of the Milwaukee Medical Society. He was also one of the founders of the Emergency Hospital of Milwaukee.

In addition to his professional interests Dr. French was very active in Masonry. He was a member of Wisconsin Lodge No. 13, of which he was a Past Master, a member of Lafayette Lodge, Calumet Chapter and Ivanhoe Commandery of which he was a Past Eminent Commander. He was also a member of the A. M. P. O. Medical Fraternity and was a past president of the Milwaukee Chapter.

In his busy life Dr. French found room for a continuance of the interest in amateur theatricals which showed itself even in his college days. He once "put on" Hamlet in which he played the part of Hamlet, and on another occasion Julius Caesar in which he played the part of Anthony.

Dr. French was a great lover of outdoor life and many of his happiest days were spent on his hunting and fishing trips with his sons.

He is survived by his wife, one daughter, Mrs. Louis Quarles, and two sons, Louis O. French of Milwaukee, and Samuel L. French, now at the Officers Training Camp, Plattsburg, N. Y.

DR. THOMAS H. HAY.

Dr. Thomas H. Hay, until recently Medical Director of River Pines Sanatorium, Stevens Point,

and for many years a well known physician of Milwaukee, died of myocarditis June 29, 1917, in his fifty-sixth year.

Dr. Hay was born in New York City, August 2, 1861. He studied at New York College and later entered the Medical Department of the University of the City of New York, graduating in 1883. After graduation he served as an interne at the Wards Island Hospital until January 1, 1884, when he came to the Northern Hospital for the Insane at Oshkosh as Assistant Physician. Dr. Hay remained at the Northern Hospital for a year and then returned to New York City and entered upon general practice in which he continued until 1889 when he moved to Milwaukee.

For several years after his return to Wisconsin Dr. Hay was physician in chief of the Milwaukee Hospital for the Chronic Insane and from 1894 to 1898 he was Assistant Commissioner of Health of Milwaukee. In 1906 Dr. Hay gave up his practice in Milwaukee and established the River Pines Sanatorium for Tuberculosis at Stevens Point of which he remained Medical Director until recently when failing health compelled him to relinquish the work. In this connection it is interesting to remember that River Pines was the first Sanatorium for the treatment of tuberculosis to be opened in Wisconsin.

Dr. Hay was a member of the Milwaukee Medical Society, its secretary for several years and its president in 1901-1902. He was also a member of the Medical Society of Milwaukee County, later of the Portage County Medical Society, the State Medical Society of Wisconsin, and the American Medical Association. As a member of the Council of the State Medical Society from the 9th District for many years he gave largely and willingly of his time and energy to the services of the profession of the state. His presence was always welcomed at the meeting of the societies of which he was a member for Dr. Hay wrote well and was a ready, interesting speaker.

His resourcefulness in practice and his genius for friendship adapted him particularly to his work with tuberculous patients, for his presence always radiated optimism and courage.

Dr. Hay married Miss Flora A. Harshaw of Oshkosh in 1887, who survives him, as do two sons Harshaw and Donald Hay.

DEPARTMENT OF NURSING

Conducted by Miss Stella Fuller, 506 Van Buren St., Milwaukee, Wis. Please address items of news and articles for this department to the editor of the department, 506 Van Buren St., Milwaukee, Wis.

THE shortage of nurses in Wisconsin is no new thing; it has been evident for a long time that we needed more graduate nurses and more practical nurses. From one hundred calls received at a City Nurses' Directory only fifty per cent were filled. This was in times of peace. In times of war when graduate nurses are enrolling with Red Cross Emergency Units and Base Hospitals it will be impossible to take care of the civilian population. To meet this need the State Council of Defense, headed by Governor Phillip, has planned a six months' course of training for sick attendants. The State Council is asking and receiving the assistance of some of the ablest and best known nurses in the State, big women who have always stood for high standards in nurses, women who are blest with the common sense to recognize an emergency and to know how to meet it.

HOW AND WHERE SHOULD ATTENDANTS BE TRAINED.

BY MISS EDITH AMBROSE,

FIELD SUPERINTENDENT DUTCHESS COUNTY HEALTH ASSOCIATION,
NEW YORK.

There is a need for more extensive nursing service available to meet the needs of limited incomes. The question assumes vital interest because of impending health insurance legislation, and unless it is answered by the nurses their cherished standards will receive little attention. The law will demand nursing service for millions for whom it has never been available. If we can offer expert supervision and adequate care of the sick, at a price within the means of the agent who is obliged to pay for it, we may consider our proposition proved.

We need two kinds of nursing service, that of the skilled educator and that of the less skilled practical worker. We cannot secure this in one person. Both are necessary, one to educate the other to do the work which requires too much time for the skilled worker to give. The vast majority of the public can pay for nursing but cannot pay the price of the registered nurse, and whether we wish it or not, whether our standards are lowered or not the public must have increased nursing ser-

vice. We must meet this demand. The question is are we going to be prepared or are we going to "watchfully wait" until the matter is taken out of our hands? Many objections have been raised to training attendants, among them that we will call into existence an inferior class of practitioner, that we will break down neighborliness among the poor, for now the attendant's work is usually done by the neighbor; another is that it will be hard to raise funds for their training. The question of legislation and objection to having attendants included with registered nurses is also a stumbling block. These objections are all answerable and must be met.

At present there is a lack of fixed standards of training attendants. Study of the situation leads us to believe that the ideal training would be one that combines the advantages of the larger hospitals for chronic patients, with training, for an equal period, under close supervision of the public health nurse in the rural district, or the visiting nurse association in the city.

The course being tried out by the Dutchess County Health Association combines experience in a large hospital, training under the supervision of the Dutchess County Health Association and public health nurses in rural communities.

My suggestion is that a plan for training attendants be worked out whereby a somewhat shorter course be offered in hospitals than is now required, supplemented by three to six months' course under the tuition of the nursing centre.—*Public Health Nursing.*

NEWS ITEMS AND PERSONALS

The Kenosha Hospital Alumnae Association gave a picnic for the pupil nurses of the Training School on Saturday June 23rd.

Miss Stella Mathews who has been appointed Chief Nurse of the Milwaukee Base Hospital called a meeting of the nurses enrolled with the Unit at the Milwaukee County Nurse's Club House, on the evening of July 2nd. She explained that these meetings would be held from time to time in order that the nurses might keep posted on new orders received from Washington and also that the nurses might become better acquainted with her and with each other.

No definite time has been given as to when the Base Hospital will be called for service but Miss Mathews advised the nurses to begin preparation as it is probable that the Unit will be ordered to sail within the next two or three months.

A recent order demands that all who report for war duty must be vaccinated for para-typoid as well as for typhoid and small-pox.

There is some doubt as to whether nurses whose parents were born in Germany will be accepted for foreign service. If they are barred it will exclude about 2/3 of those who are now hoping to go.

The French lessons given under the University Extension Course are being well attended. Nothing definite is known as to the future location of the Milwaukee Base Hospital, but it will probably be "somewhere in France".

Miss Ruth Haskins graduate of Hanover Hospital, has accepted a position with the Milwaukee V. N. A.

Mrs. Adelaide Northam, graduate of University of Michigan, Ann Arbor, has been employed to fill the position of Superintendent of Nurses at the Milwaukee County Hospital made vacant by the resignation of Miss Mary Good. Miss Good will go to her home in Ohio for a long rest.

Miss Cora Nifer, who has been seriously ill with pneumonia is much improved and expects to go to Indiana for the remainder of her convalescence.

Miss Cornelia Van Kooy of the W. A. T. A. is having a month's vacation and will travel in the East.

Miss Harriet B. Leach, a graduate of the University of Minnesota Hospital, has taken the position of Superintendent of Nurses at the Milwaukee Maternity Hospital. Miss Gertrude Iserman the former Superintendent is now Superintendent of Nurses at Hanover Hospital.

Miss Katherine Olmsted, who has for the past year been Supervising Nurse of the W. A. T. A., has accepted a position with the Children's Bureau at Washington and will begin work September 1st. Miss Olmsted will have charge of Rural Nursing in the United States. Under Miss Julia Lathrop, chief of the Children's Bureau, she expects to do for the United States what she has done in Wisconsin, that is, urge legislation that will provide for the employment of rural nurses to assist the physicians of isolated places in caring for the sick, and to teach preventive medicine. Through Miss Olmsted's courses for public health nurses and her efforts in placing and supervising them, Wisconsin has gained the attention and praise of the whole country.

Miss Nestor Edwards, Social Service Worker of the Kimberly Clark Paper Company, gave a talk on Service work in factories to industrial nurses at the University Extension Building, July 2nd. Miss Edwards is familiar with every phase of her subject and has been very successful in establishing better ventilation, sanitation, first aid equipment, lunch rooms, etc. She proves that it is not charity but good business. The Paper Makers of America have invited her to speak to them in New York some time this fall.

Nurses employed by the W. A. T. A. and Mrs. Joseph Bradshaw, Superintendent of Milwaukee School Nurses have given several talks to High School girls, explaining the need of more nurses and urging them to take up a course of training.

The nurses of Wisconsin are aiding Mr. Hoover in his campaign for food conservation. Besides the slogan, "Clean Your Plate," they have adopted, "Keep Well." They know that every person who is needlessly sick is

boosting the cause of the enemy. He can not do his own bit. In addition he takes the attention of someone who, except for his need, might be doing big things for Uncle Sam.

Some comment has been created by the action of the City Council of De Pere in declining to reappoint Mrs. O'Shaughnessy visiting nurse. The action was taken to cut down expenses. It is hoped that the aldermen will reconsider the matter.

The Red Cross is making every effort to encourage women of superior education to enter the training schools. Teachers' College of Columbia University is sending out literature calling the attention of college women to the need for more nurses, and it is probable that some hospitals will give credit for a college degree.

Miss Jane Delano of the Red Cross is urging the State Boards of Nurse Examiners in the different States to hold extra examinations and to get out reports of examinations as speedily as possible.

The Wisconsin Board of Nurse Examiners conducted examinations at the Federal Building in Milwaukee on June 26th and 27th. One hundred and twenty-five nurses took the examination. It is expected that there will be many applications to the Red Cross from the nurses who have passed the examination successfully.

Miss Anna Goodrich, President of the American Nurses' Association, advises all nurses to join their State associations as it simplifies enrollment under the Red Cross.

Another Wisconsin examination will be held in October.

NEENAH NEWS NOTES

The Baby Week Campaign which was quite a success in many particulars, is doing follow-up work in the form of a Children's Fresh Air Camp.

A large farm house, two and a half miles from the city has been secured, and Miss Louise Zorn, the school nurse is there in charge of fourteen children.

Dr. S. D. Greenwood, who has been ill has returned to his work and Dr. Geo. H. Williamson, who has been laid up by rheumatism is again able to be out.

Miss Marie Klein has been discharged from the sanatorium at Wales and returns in excellent condition.

The work of the Red Cross is occupying the attention of the women of the city, largely taking the place of all social activities. Two classes are taking instruction, one in dietetics and one in elementary hygiene and home care of the sick.

The amount raised thus far, for Red Cross work is \$21,600 and it is expected to reach the \$22,000 mark.

Miss Grace Palmbach of Appleton died June 26th after an illness of six months. She was a nurse of enviable reputation, one who gave her very best to her patient, possibly too often entirely ignoring her own welfare. She was an enrolled Red Cross Nurse, a graduate of Trinity Hospital Training School, class of 1909, was a member of the State Association, and president of the Fox River Valley Nurses' Association. She will be sadly missed by the profession as well as a large circle of other friends.

The Wisconsin Medical Journal

Volume XVI*

MILWAUKEE, AUGUST, 1917

Number 3

ORIGINAL ARTICLES

THE ETIOLOGY OF PRIMARY GLAUCOMA.*

BY P. H. DERNEHL, B. S., M. D.,

MILWAUKEE.

The etiology of a disease, employing the term in its true meaning, treats only of and inquires into the causes of a disease, both general and specific, and of its efficient, as distinguished from its final causes. It should not, as is frequently done, be employed as synonymous with pathology of which it is merely a branch. Pathology covers the entire science of disease in all its manifestations, whether structural or functional, progressive or regressive. As physicians, we have been in the habit of looking upon its sphere as lying really too much within that of practical medicine and more particularly human medicine. Often enough, and be it said to our discredit, we hold it in a measure, as unworthy of being studied for its own sake, and fail in our devotion to it.

Accepting the term pathology in this its full signification, it follows that its problems are many-sided and must be attacked from various points of vantage. Naturally the subject falls into certain arbitrary subdivisions, the chief of which are: (1) Morbid anatomy, gross and microscopic, terms which are self explanatory. (2) Nosology, which treats more specifically of the systemic classifications of diseases. (3) Therapeutics, which relates to treatment of diseases and the action of remedial agents. (4) Pathogenesis, which has reference to the generation and development of diseases and, (6) Etiology under which caption that which follows must be classed.

There are probably few subjects in ophthalmology more important and more obscure than those relating to the etiology of primary glaucoma.

The etiology of the secondary types is usually apparent in itself or gives small difficulty as a rule in its deductions, and I shall not dwell specially upon it. In primary glaucoma heredity and individual predisposition no doubt play a part.

In no domain in the field of pathology has the collection of well authenticated cases of heredity been so well exemplified as in ophthalmology, and yet much remains to be done, and heredity must be considered of much greater importance in ophthalmology than has hitherto been the case. It is pleasing to note however that the literature relating to the inheritance of ocular defects and conditions is increasing rapidly. The rediscovery of Mendel's work in 1900, and its application in the light of our present day researches in ophthalmology and allied fields in medicine is destined, I am convinced, to bring rich rewards. The splendid productive investigations of the late Edward Nettleship stand proof of what can be accomplished in this field.

Priestly Smith¹ has found that primary glaucoma sometimes occurs in several members of a family, appearing in two or more generations, and in two or more members of one generation. Lawford² gives record of a family in which three generations showed eight members affected with glaucoma, the fourth generation escaped. He advanced the opinion that hereditary primary glaucoma is usually continuous in descent, not skipping a generation to reappear in the next, and that it may be transmitted and inherited by either sex. Calhoun³ found three generations of one family affected by hereditary glaucoma simplex. Of sixteen individuals, eight exhibited glaucoma, two were amblyopic with doubtful glaucoma, and six were unaffected. Pagenstecher⁴ cites a mother and three sons. Benedict⁵ relates the history of an old gouty general whose son, also gouty, but blue eyed, escaped glaucoma, his two daughters, dark eyed, both exhibited glaucoma with subsequent loss of sight. Arlt⁶ cites several hereditary cases. Von Graefe⁷ was of the opinion that the inflammatory type of glaucoma, more than any other tended to

*Read before the Milwaukee Oto-Ophthalmological Society.

be inherited, and related several families in which this form continued through three and four generations. A fact deserving of note, was that the later generations acquired the disease at a progressively earlier age, though the prodromal stage was usually of a longer duration, 8-10 and even 16 years. Calhoun also calls attention to this latter fact in his cases. In general, however, heredity does not appear to play an important role and where present, the predisposition probably rests upon a local predisposing factor, as inherited rigidity of the sclera, excessive irritation of the secretory nerves, arterio-sclerosis, etc. More information on this phase of the etiology of glaucoma must be brought forward, and offers a fertile field for investigation.

A predilection for glaucoma appears, from some writings, to be manifest among the Jews. Benedict⁷ as early as 1842 first called attention to this. Arlt⁸ had a proportionately higher Jewish percentage among his glaucoma patients. Rydel's⁸ statistics credit the Jews with 23%. Schmidt-Rimpler⁹ found a predisposition among the Jews in Berlin. Fuchs and De Wecker¹⁰ also note Jewish predisposition. Wagner¹¹ in Odessa had 542 Gentiles and 685 Jews in his 1,227 glaucoma patients. On the other hand some writers are unable to verify such findings and until we have more definite data bearing upon this, it must remain uncertain that glaucoma manifests a particular predilection for the Jewish race. Yet altho a racial predisposition no doubt does obtain, the climatic influences, in this connection, to which Oliver¹³ has called attention, as a potent factor, must not be lost sight of. Thus Brugsch Bey¹² in Cairo found glaucoma more prevalent among the Egyptians than among the Europeans. It is more common among the negroes in Rio de Janeiro than among the whites. Mailand Ramsay believes that Englishmen are more commonly afflicted than Scotchmen. In Havana, it is said to be found in proportion of eleven whites to six negroes, one mulatto and one of the yellow race. The Latin races seem more predisposed than the Anglo-Saxons irrespective of where they may reside. Glaucoma is said to be quite common in Africa. In Europe it predominates in Russia. In China it appears to be less frequent. Japan shows about the same percentage of cases as does Europe. It is reported as very frequent in Java and is said to affect relatively young individuals there.

The frequency of occurrence of primary glaucoma

in relation to other eye diseases, presents quite constant figures. Von Graefe found in his clinic among 12,076 patients, 269 primary glaucoma 1.27%. The clinic at Wiesbaden had among 14,619 eye patients 217 or 1.48%. H. Cohn reports among 111,691 eye cases, nine of primary glaucoma among every 1,000 patients. De Wecker in Paris had 1.17%. Gama Pinto in Lisbon 1.1%, and Krukow in St. Peterburg 1.8%.

The disease is somewhat more prevalent among women than men, tho there, also, geographical factors appear to have an influence; for instance Wagner¹¹ in Odessa found twice as many women as men afflicted. The common ratio however is given as about 6:5. This ratio pertains to the whole life. In women the susceptibility may be influenced by the menstrual cessation. Glaucoma attacks by preference older individuals. The liability is extremely slight in childhood and early youth, less than 1% occur under 20 years. It continuously increases up to and during the seventh decade, so that between 60 and 70 years it is more than twice as common as from 40 to 50 years. The enlargement of the lens during this period may act as a predisposing factor as first suggested by Priestly Smith¹⁴. In this connection Schmidt-Rimpler⁹ calls attention to the fact that the greater prevalence in the later years becomes more apparent if we consider that the total number of those reaching advanced years becomes progressively less. Exceptionally we find glaucoma in childhood. Von Graefe, Stellway, Laquer, Schirmer¹⁵ and others, have reported authentic cases. Schirmer operated upon a 12 year old boy for glaucoma simplex, whose eyes showed a marked excavation of the disk. Glaucoma is not infrequently associated with microphthalmms in early childhood. Dalen¹⁶ and Peters¹⁷ believe that it is inaugurated in these cases by an abnormal condition of the filtration angle. It is a disputed question whether the application of the term infantile glaucoma introduced for these and for cases of hydrophthalmus is correct, some holding it should be strictly limited to those types of glaucoma only which are clinically indential with primary glaucoma of adults.

Seasonal and climatic effects may have an influence upon glaucoma, but are not based upon very cogent evidence. During the winter months it appears to be more common than during the summer months, and least common during June in the temperate regions. This may be occasioned by

the blood pressure changes subsequent to climatic variations. Lobo in Bogota on the other hand finds in direct contrast to the above, that glaucoma is very common in the Central American countries. Of its occurrence in the Arctic regions we have no records.

Much has been said and written of glaucoma in its relation to general systemic diseases. Neuralgia of the trigeminus has been given as a causal factor by numerous investigators, a conception which leaves little doubt of its correctness in the light of recent experimental studies. Frequently neuralgias precede for a longer or shorter time attacks of glaucoma. Hutchinson¹⁸ as early as 1864 called special attention to this and has been followed by numerous other writers on the same subject. Gout and arthritis have ever been favored as predisposing factors, especially so by the older masters and writers, Weller, Junken, Mackenzie, Sichel, Arlt, and others. In a few instances perhaps a causal relation may have been established, but in the light of our present knowledge little credence will be given to these as factors, and if at all, then to the predisposition occasioned by the vascular changes, associated with and commensurate with the state of gout, rheumatism, or arthritis. The *cessatio mensium* has been drawn upon largely as a cause, because of the habitual alterations in vascular pressure during this period and the greater instability of the vasomotor system in women. On the other hand statistics show that glaucoma is more common in the years following the menopause after the circulatory disturbances have ceased. Yet one might be led to think that the hyperemia of the processes of the ciliary body caused by the initial circulatory disturbances, plus the gradually increasing rigidity of the sclera may pave the way for a manifest glaucoma. We have no records of glaucoma following a sudden cessation of the menstrual flow in young women, so that if the *cessatio mensium* has a bearing at all, it must be an indirect one. Suppression of habitual hemorrhoidal bleedings, emphysema, valvular lesions, sedentary habits, over-ardent worship at the shrines of Bacchus and Venus, have been advanced as causes. Following or associated with attacks of influenza glaucoma has been noted, Risley¹⁹, Schmidt-Rimpler⁹, De Schweinitz²⁰, and others. It is generally held that syphilis is not a causative factor, and the same obtains for diabetes and tuberculosis, yet these affections no doubt exercise an unfavorable influ-

ence upon the course of the glaucomatous process. Whether damp and unhygienic dwellings predispose are open questions. It is rather remarkable that glaucoma is rarely associated with nephritis, despite the fact that in nephritis we may meet with such decided vascular disturbances, and retino-vascular changes. In those cases of nephritis in which glaucoma was noted, it was usually of the secondary hemorrhagic type, Schmidt-Rimpler⁹. The state of the general vascular system however is of no small importance as a predisposing factor. Degenerated vascular conditions are commonest at the age at which primary glaucoma becomes most manifest and, while though frequent, they are not specific nor characteristic, for most individuals past middle life usually present some degree of arteriosclerosis. Rohmer is of the opinion that arteriosclerosis may produce glaucoma through the obstruction of the venous outflow, thereby causing an edema of the vitreous, in fact any systemic derangement of the vascular function can not be without its influence upon the vascular function of the ocular tissues. The study of any case of glaucoma, therefore, requires a careful consideration of the cardio-vascular system and this should never be lost sight of. Campbell Posey states that if a number of non-glaucomatous individuals be compared with an equal number of glaucomatous patients of corresponding ages, it is extremely likely that the blood pressure in the glaucomatous would be higher, the difference being undoubtedly greater in the congestive types than in the simple non-congestive. It must be borne in mind however that many persons with abnormally high blood pressure are entirely free from glaucoma and that many glaucomatous persons have a low blood pressure. We must desist from a further consideration of this important phase of the etiology which links so directly the morbid anatomy of the vascular and lymphatic circulation of the eye in connection with glaucoma.

The effect of emotion and psychic influences, states of depression, etc., in promoting attacks of glaucoma must be credited as an important factor. This has frequently been designated as glaucoma emotif. Many patients associate their attacks with social excitement, anxiety, worry, anger, sleeplessness, or fatigue. Interesting in this connection is the history of two eminent ophthalmologists, Laqueur and Javal. Laqueur attributes his first attack of glaucoma to an exhausting morning in

the operating room, subsequent attacks were inaugurated by anger, worry, and embarrassment. Javal's first attack followed directly upon the excitement to which he exposed himself in an electoral campaign. His second eye became stricken at the termination of the Dreyfuss case in which he was intensely interested. Numerous authentic records are intact which establish without question that psychic states and nervous excitement have precipitated attacks of glaucoma in predisposed eyes.

Among the more directly predisposing etiological factors, errors in refraction, eye strain, glare and associated conditions need be considered. Hyperopia is frequent in glaucoma and though it may be occasioned by the glaucomatous process itself, its pre-existence in the majority of cases is certain. In this connection, Stedman Bull first pointed out that the small size of the filtration angle is of importance. A small cornea was thought by Priestly Smith to predispose. While glaucoma is not a disease of small eyes, small eyes are apparently more susceptible to primary glaucoma, and appear to be attacked earlier in life than others, yet they are not the only eyes attacked, for the disease is met with in eyes of average and more than average size. The average horizontal diameter of the normal cornea is 11.6 m.m. Eyes in which this meridian measures only 10 m.m. rarely escape glaucoma. This may be due to a disproportionately large lens, or, as has been shown as characteristic of hyperopic eyes, to a greater rigidity of their sclerae. Myopic eyes appear to be less frequently attacked, and, when affected, the glaucoma usually runs a slower course. Statistically, Kryoukoff²¹ gave in cases of primary glaucoma, hyperopia 43.18%, emmetropia 28%, myopia 28.78%, and more recent statistics from the Munich clinic in 71 cases of primary glaucoma show 26% emmetropic or myopic, in 115 cases of the inflammatory type 77% were hyperopia the remaining per cent being equally divided between the emmetropia, and the myopic. While it appears possible therefore that the refraction may influence glaucoma, yet withal it has not been statistically proven that hyperopia has a direct causative bearing upon glaucoma, for at the time of life when primary glaucoma chiefly occurs the proportion of hypermetropes is increased by the acquired hypermetropia of old age, and we lack up to the present all evidence that hypermetropia is more prevalent

among glaucoma patients than among the general population in the same life periods (Priestly Smith).

It is said that the majority of glaucomatous patients have a dark iris. Rydel⁸ found in 53 cases of primary glaucoma, 31 brown and 23 gray or blue eyes. Gama Pinto²² on the other hand found that glaucoma was no more common among the dark eyed Portugese than among the blue eyed races of northern Europe.

One other important question must be touched upon. Can trauma promote a primary glaucoma? The consensus of opinion is negative. Schmidt-Rimpler in his exhaustive monographs on glaucoma emphatically denies it. A few reported cases were probably not true primary glaucoma. Von Graefe in 1869 in the last of his monumental works on glaucoma forcefully expresses the opinion in his chapter on the etiology, that a typical primary glaucoma in a previously healthy eye can not be inaugurated by trauma. All recent writers on this subject have not presented a single authentic case. If, however, an eye is already diseased, trauma may precipitate such a state, but we must not ignore the psychic effect as a partial factor. The predisposition which depends on structural peculiarities or changes in the eye falls more truly into the realm of morbid anatomy. Likewise the action of drugs might better be discussed under therapeutics. A few words only upon this rather vexed question. The employment of atropine, homatropine or any of the mydriatics we know is apt to aggravate an incipient glaucoma or may even precipitate an attack in a previously healthy eye. When the filtration angle is already narrow, the peripheral folding, and thickening of the iris which results from a dilatation of the pupil may block the angle entirely. Recently authentic cases have been reported in which Euphthalmine, and Dionin occasioned like ill effects.

After all has been said about the etiology of glaucoma, excepting perhaps that which relates to the secondary forms, we cannot fix upon any one theory thus far propounded to explain the essential cause of increased ocular tension satisfactorily. Though this exposition is of necessity but a very brief one, it will serve at least to bring out one luminous fact, that so far as our knowledge of the etiology of glaucoma is concerned, we are but as children gathering pebbles on the beach while the

undiscovered oceans roll beyond our feet, and with the great poet our call must be, "More Light."

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Snails without their shells, or otherwise with their shells stamped and mixed sometimes with cheslep or rennet, do draw out thorns or any other thing out of the flesh, though never so deep, if they be applied to the place. And also being laid on the belly of them that have the dropsy, they suck out the water. But the same must not be loosed from the belly, until all the humours or water be sweat forth, or else the same plaister of snails doth fall away of itself. (Jacob Hollerus.)

THE RELATION OF ACIDOSIS TO EDEMA IN PNEUMONIA.

BY A. B. SCHWARTZ, M. D.,

MILWAUKEE.

Variations in the amount of water retention of the skin and subcutaneous tissues determine their elasticity. Such changes in elasticity may be recognizable as edemas which pit on pressure by the palpating finger. In other instances such evidence of water retention is not present. With the aid of the elastometer devised by Schade¹ it has been possible to detect edemas not appreciable by the palpating finger. The results of clinical studies made with the instrument² indicate that variations in the water content of the skin as expressed by its degree of elasticity is more frequent and more profound than is otherwise appreciated. Even in the supposedly local edemas, disturbance in the normal elasticity may be demonstrated in distant and apparently normal areas.

With the elastometer, readings were taken on a series of children with pneumonia³. In only a few of these children was there any degree of palpable edema. The elastometer, however, demonstrated a constant occurrence of edema in this disease. It was further shown that the greatest amount of edema occurred during the height of the disease, the elasticity curve approaching normal after crisis. In a few instances this return to normal was complete. In other instances, evidences of slight persistent loss of elasticity remained for some time after convalescence. The significance of these findings becomes very important in the light of recent studies in pneumonia.

It was thought that this edema might bear some definite relationship to the well known salt retention which is observed in pneumonia, water retention being thereby a consequence of the so-called histo-retention of sodium chloride. The results of NaCl determinations in the blood plasma and urine compared to the elastometric curves did not confirm this hypothesis, their respective variations exhibiting no parallel course. While the elasticity curve, as previously remarked, may continue to show elasticity loss after convalescence, the concentration of NaCl in the blood plasma exhibits an abrupt rise coincident with crisis in the disease, the concentration in the blood readjusting itself simultaneously with the rise of NaCl excretion in urine. Thus, during the febrile period of pneumonia, the NaCl content of the blood plasma in

the patients of this series ranges from .50% to .53% and after crisis approaches a concentration of .59% to .62%. These results confirm those previously reported by McLean⁴. While it has been long observed that retention of water may take place despite normal sodium chloride excretion, the occurrence of a high Cl concentration in the plasma of nephritics as shown by McLean offers further contradictory evidence to the idea that Cl concentration and edema bear any precise relationship of cause and effect.

Fischer⁵, offering the experiments with simple protein colloids as analogous with the phenomena of water retention in the body, maintains that both sodium chloride and water retention are the result of identical factors, namely, "an abnormal production and accumulation of acid in the body." Recent investigations seem to lend support to the idea that the water retention in pneumonia may be dependent on such an occurrence. Various observers have demonstrated in pneumonia a diminution in the carbon dioxide content of the blood, an increase of alkali tolerance and an increase in ammonia excretion.

Frothingham⁶, speaking of the results of these tests, states that they are more variable than in other diseases with acidosis. He suggests, "That if an acidosis is present in pneumonia it may be due to some other factors besides these that produce acidosis in diabetes or chronic nephritis." In his series of observations, it is interesting to note that in one instance (Med. No. 3630) the carbon dioxide tension of the alveolar air gives a reading after crisis of 33.8 which during the disease proper had been 40.3. It is remarked that the patient developed an empyema.

Barcroft and Lewis⁷ measured the percentage saturation of the blood with oxygen exposed at 37° C. to 17 m.m. pressure of that gas. In four patients with pneumonia, a definite degree of acidosis was demonstrated as shown by the decline of the saturation percentage. They believe the finding may be utilized as an aid in prognosis.

The presence of increased production and excretion of lactic acid is frequently associated with the inhibition of oxidative processes in the body. In this connection, some unpublished results of lactic acid determinations from the Sprague Laboratory of the Children's Memorial Hospital, Chicago, are of interest. The Sprague investigators have made determinations of lactic acid on the urines of nor-

mal children and of those obtained from patients with pneumonia. They have found the normal output to be 5—9 milligrams per 100 c.c. urine, values agreeing well with those obtained by other observers in the adult^{8, 9}. In the urine from patients with pneumonia, values ranging from 17 to 33 milligrams per 100 c.c. have been obtained. While according to Ryffel, the apparent increase of lactic acid excretion is not a constant feature in this disease, even its occasional occurrence lends further support to the previously observed suggestion that the factors controlling acidosis in pneumonia are more variable than those associated with other diseases in which acidosis is present. Further studies are desirable to establish the correctness of this observation.

Peabody's¹⁰ results relative to the carbon dioxide content of the blood in pneumonia suggest an intimate relationship between this phenomenon and the degree of edema. He has observed very low and even the lowest figures in the carbon dioxide content of the blood "some days after the patient has become afebrile." He suggests that the changes in the carbon dioxide content of the blood are in line with other metabolic changes associated with infection, "which are sometimes more marked after the fall of temperature than during the febrile period itself." These findings are of the greatest significance exhibiting a parallelism with the evidence obtained by the elastometer, namely the persistent water retention after the crisis. While the sum of these manifestations may not actually constitute the controlling mechanism of edema in pneumonia the interrelationship is evidently a very close one.

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DUODENAL ULCER IN INFANTS.*

REPORT OF FOUR CASES.

BY W. H. BARTRAN, M. D.,

GREEN BAY, WIS.

My reasons for giving these four cases are:

First: They present a group.

Second: The infants were surrounded by the same environment.

Third: They suggest an epidemic form.

Fourth: Duodenal ulcer is a much more common disease than we have previously supposed.

While numerous isolated cases have been reported either separately or compiled, only a few occurring in groups of three or more cases have been given. In this series, no ulcer was found up to November 17, 1914, nor since May, 1915. The four cases occurred within that time.

Helmholz¹ called attention to grouping of duodenal ulcer cases, mentioning twelve observed by him in the last four months of 1908. In the first eight months of that year and during the entire twelve months of 1909, none were observed. Later, a series of cases obtained from material at one hospital showed 11 cases in 7 consecutive months, while never before nor since were any duodenal ulcers found.

Holt² calls attention also to this fact of grouping by observation of four cases in 1800 autopsies; three occurred within a period of three months, the fourth was 2½ years before.

The infants were born of parents in all walks of life, but the babies lived under one roof, were surrounded by the same environment as to care, food, and medication in every case. Several hundred babies had lived under similar conditions for years without indication of like trouble.

We have had epidemics of chicken-pox, diphtheria, meningitis, and impetigo in years past so that many duodenal ulcers occurring closely together naturally makes us associate them with a like etiologic factor.

It is only since 1908 that the attention of the medical profession has been called to duodenal ulcer. In 1109 autopsies on children from five

days to eleven months old, Schmitt³ found 1.8% duodenal ulcers. Entz⁴ of Budapest reports ten cases in 364 autopsies on children under one year of age, or 3%. Holt² states that the age at death corresponds very closely to that of those infants who have died from marasmus and that the relationship is very suggestive and striking.

CASE 1. Born out of hospital, September 3, 1914, was the first baby. Admitted September 5, 1914, and died November 17, 1914, aged 42 days.

Nothing known of father, but mother was well developed, strong, healthy, very intelligent. Age 27. Hospital report shows a bottle-fed baby weighing 6 lbs. 6 oz. at entrance. Normal in every respect. November 1st food apparently distressed him and he became slightly edematous over the body and very anemic. Edema and anemia increased until both were very marked. The urinary findings upon repeated examinations were negative. November 9th, convulsions appeared simultaneously with bloody vomitus and dark stools. The vomiting and appearance of blood-clots in the bowel movements continued until death on the 17th.

Post mortem findings: A duodenal ulcer 2 c.m. long by 1 c.m wide was found on the posterior surface of the duodenum above the papilla. The edges were hard, sharply defined, with base of ulcer indurated. There was a small blood clot attached to the base of the ulcer and numerous small clots were found scattered throughout the length of the small intestine. The stomach, brain, heart, lungs, kidney and spleen findings were negative. General edema and anemia were very marked.

CASE 2: Genevive, born outside hospital June 27, 1914, admitted July 10, 1914, and died February 4, 1915, aged 7 months and seven days. Father apparently in good health. Mother died of tuberculosis soon after birth of baby. History shows a normal child, bottle-fed, weight 8 lbs. upon entrance. August 10th was taken sick with cerebrospinal meningitis. Impetigo appeared two weeks later and lasted one month. Remained isolated 82 days in all, at the end of which period, baby appeared well with no noticeable after-effects. Weight December 18th was 8 lbs. 4 oz.. January 30th was distended and very restless and had a marked edema. February 1st breathing was labored and the child uttered sharp painful cries when touched and was of a wax-like color, and had a wheezy sound accompanying each breath. Died

*Read before the Wisconsin Surgical Association, May 9, 1917.

Feb. 4th. No hemorrhage in vomitus or bowel-movements at any time. Temperature normal.

Post mortem findings: Duodenal ulcer 2 c.m. long and 1 c.m. in width, beginning just below the pylorus. Edge ragged and uneven, extending just through the mucosa. No induration or inflammatory changes. Remainder of stomach and bowels was normal. Empyema left side, purulent pericarditis and pus in mediastinum, pus yellowish-green in color and very thick. Kidneys, normal. I may say here that at the time this child was isolated for cerebro-spinal meningitis, there was a mild epidemic of this disease in the institution which was preceded and accompanied by impetigo.

CASE 3: Gene, born out of hospital January 21, 1915. Admitted January 27, 1915. Died March 7, 1915, at the age of 41 days. Father and mother unknown. Record shows baby was clean and healthy-looking upon admittance. It vomited, however, a bloody fluid and had blood in the bowel movements. Refused the bottle the day of entrance. It vomited blood daily until Feb. 17th, after which date no blood was found. Horse serum, 2 to 5 c.c., was injected subcutaneously on several consecutive days. Baby did well up to March 6. The blood in the vomitus and bowel-movements entirely disappeared. The temperature registered 100. It began to cough, and upon March 7th went into convulsions and died suddenly.

Post mortem findings: Showed no evidence of organic disease. The duodenum was clean and stomach and intestine throughout thoroughly examined, and only after rigid search was the seat of a small ulcer found on the posterior surface of the duodenum, $\frac{1}{2}$ inch below the pylorus. Nuzum⁶ also reports a case in which the ulcer healed very rapidly, which goes to show how quickly an ulcer may heal, even when the general condition of the patient does not warrant the expectation that it will do so.

CASE 4: Andrew, first baby, hospital born, Jan. 7, 1915, birth normal. Died May 12, 1915, at the age of 4 months and 5 days. Nothing known of father, but mother was small, frail in health and sixteen years old. History shows poorly nourished baby, 6 lbs. 7 oz. in weight at birth, falling to 5 lbs. 9 oz. at death. Bottle-fed, bowel movements averaging one daily with medication of olive or castor oil. One month before death, it was noticed that food distressed him. Abdomen was distended;

he drew up his knees, turned his head from side to side and rolled his eyes. A few days before his death the vomitus and stools contained blood. Wassermann was negative.

Post mortem findings: Clean cut round ulcer on posterior duodenal wall 1 c.m. in diameter situated 1 c.m. below pylorus. No induration nor inflammatory changes about it. Typical punched-out appearance. No blood found in stomach or intestines, which were normal. Heart, lungs and kidneys, normal. General slight, secondary anemia.

You will observe that the deaths occurred between November 17, 1914, and May 12, 1915, a period of six months. The family and personal histories are rather indefinite, although one mother died of tuberculosis, while another was young, weak, and in very poor health. The babies were all fed by bottle from the same milk formula that the other hundred infants received. These four babies were anemic, poorly nourished, of the marasmic type, and three of the four were males, corresponding, accidentally perhaps, to the ratio found afflicted in the adult. I might mention the fact here that ulcer in infants is more rare in the stomach than in the duodenum. The statistics as given by Entz⁴ showing a ratio as high as one to ten. In the adults the figures of Eusterman⁵, Mayo Clinic, running as one to three.

The age varies from 41 days to seven months and seven days. We have reports of cases where perforation has taken place in infants three hours old. Nuzum⁶ gives in detail the case of a baby girl 14 hours old who passed blood and died 12 hours later from the hemorrhage. The findings at autopsy showed a band of adhesions about $\frac{1}{2}$ inch wide, extending from the site of the ulcer on the duodenum to the gall-bladder, also some friable adhesions, and an exudate about this area. A small quantity of blood had oozed through the perforation into the peritoneal cavity and the mucosa around the tiny ulcer was smooth and soft, not noticeably different from that of the normal parts. The findings showed a condition that must have been of long standing, certainly existing for days before birth.

Holt² found 9 ulcers in the new-born in 65 cases of duodenal ulcer. Seventy per cent of the patients were between 6 weeks and 5 months old.

DIAGNOSIS. In every case that we have reported, there is the history of pain with the taking

of food, uneasiness, crying as though in distress distention of the abdomen, and in three cases, marked edema. The exception died suddenly during convulsions. As you will readily observe, it is impossible to make a diagnosis of duodenal ulcer without the findings of blood in the vomitus or bowel movement, while occasionally to these symptoms we may add those of perforation into the abdominal cavity.

Of eleven cases reported by Entz⁴, none were diagnosed during life, so that we are firmly convinced that we have in the past, overlooked many of these cases of duodenal ulcer, and placed the trouble at the door of indigestion, anemia, marasmus or pyloric spasm.

ETIOLOGY. What causes duodenal ulcer is a debatable question. It is only by approaching it from every angle, by using an immense amount of material taken from all ages and standards of life, by considering detailed family and personal history, by weighing medical and surgical findings, by studying complete pathological and bacteriological examinations, and experimentations, both on the human being and the animal, upon the living as well as the dead subjects, that we may expect to arrive at the cause or causes.

Tuberculosis: Innumerable cases occur in which the ulcer has been reported tuberculous, so that without doubt, we must credit the tuberculous germ as a primary cause in many ulcers. However, it is easy to separate these cases, because of the preponderance of the general tuberculous symptoms so that we may assume the ulcer is only one of the many findings, and that it is of secondary importance.

Syphilis: Syphilis may account for some ulcers, manifesting itself in the duodenum along with its manifestations in other parts of the body.

Shannon⁷ reported a case in a paper read before the Ohio State Medical Society in 1900, in which the findings and course of the disease under anti-syphilitic treatment conclusively proved that the spirochaete pallida was undoubtedly the cause of the ulcer. These cases are, however, rare.

Burns: Curling's⁸ ulcer, or ulcer following burns may be passed over with Moynihan's⁹ statement that in twenty years, not a single case was observed in the post mortem room of his hospital, wherein cases of burns were very often admitted.

In his series of cases treated by operation, it is a fact that no case was met with, in which a burn could be in any degree held responsible for the appearance of the ulcer, or indeed, was any noteworthy scar or burn or scald ever found upon the surface of the body of patients who were treated for ulcer. Sehmitt¹⁰ says, "Burns and duodenal ulcers are fables." However, all reports of cases of ulcer found after burns are of preantiseptic days, the days when large pockets of pus accumulated under the burned area. With modern treatment, infection has been diminished or done away with entirely, and possibly the occurrence of ulcer with it. This speaks strongly in favor of the septic emboli theory.

Carbohydrate Fermentation: Willard J. Stone¹¹ states that carbohydrates not digesting in the stomach favor a bacterial decomposition, which is largely composed of organic diffusible acids, such as lactic, acetic, and butyric acids. These irritate the gastric mucosa and produce a hyper-secretion, that is, a hyperchloridia.

Uremia: The toxins that should be excreted by the kidneys may be thrown off by the duodenum as found by Stassano's¹² experiment upon animals. These toxins may injure the mucosa, but uremia as a cause is not supported by evidence of renal findings.

Toxemia: T. M. Bowles¹³ in 1909 suggested that infectious diseases, such as typhoid fever, measles, diphtheria, and scarlet fever, may cause inflammatory action in the lymphoid follicles of the stomach and intestinal walls. Most of these follicles heal promptly, but possibly one might persist, enlarge, and, due to various agencies like the action of the gastric juice, form a typical ulcer.

Thrombosis: After birth, normal thrombosis of the umbilical vein and its small ramifications, resulting in terminal anemia occurs. This may produce functional necrosis of the intestinal epithelium. If the process goes far enough, areas die and removal of this dead tissue will give the ulcer effect. The chemical action of the gastric juice impinging upon a certain point of the duodenum may be just enough to destroy the weakened tissues.

Hyperchloridia: Sippy's theory¹⁴ is that an area of mucous membrane through malnutrition or necrosis loses its normal resistance to the action

of the gastric juice, and becomes digested. The resulting defect is an ulcer. This malnutrition or necrosis may be due to a bacterial invasion through the blood.

Selective localization and haematogenous bacterial invasion. Rosenow and Sanford¹⁵ in the *Journal of Infectious Diseases* of July, 1915, give the results of their study of the bacteriology of ulcer in man. Cultures and sections were obtained from the living during operations and used in conjunction with the clinical history of the case. The findings were that the number of streptococci is greater in the relatively accurate ulcers and in chronic ulcers in which the clinical history and cellular infiltration indicate a recent lighting-up of the infections. The streptococci are fewest and even absent in the very chronic, markedly indurated ulcers which have given no clinical or microscopical evidence of recent acute inflammation. A variety of bacteria were found, but not nearly so many as one would naturally suppose, staphylococci, colon bacilli, diphtheria, *Bacillus Welchii*, yeast, and sarcinae were found always accompanied, however, by the streptococcus.

Of 24 cultures a pure strain of the streptococcus was obtained in nine with a mixed culture in all but one of the remaining fifteen. Culture of this streptococcus when injected into dogs, rabbits, and guinea-pigs, showed a low grade of virulence and a marked tendency to localize in the mucous membrane of the stomach and duodenum producing circumscribed areas of infection associated with hemorrhage and ulceration in a high percentage of the animals inoculated. This finding corresponds very closely to an investigation of the streptococcus isolated from cases of rheumatic fever, endocarditis, appendicitis, herpes zoster, all of which, when cultured and injected into the animal, showed a tendency to localize in specific tissue, having as it were, a selective action.

Gerdine & Helmholz¹ obtained a streptococcus viridans from one of their cases, that, when injected into dogs and rabbits, produced hemorrhage and ulceration in the duodenum and the pyloric end of the stomach. These same writers have also found streptococcus in the ulcers of 11 cases of one series, and ten out of 14 ulcers in a second series. The investigations by Rosenow¹⁵ and Helmholz¹ were conducted so carefully that there can be no possibility of error in the conclusions drawn,

namely, that a certain streptococcus is the cause of a great many ulcers of the duodenum, also that their persistence is the reason why so many ulcers fail to heal.

Streptococci and other bacteria may find access to the body of the fetus through the maternal circulation. Later in life the bacteria may be absorbed from the tonsils, roots of teeth, sinuses of the head, boils, pockets of pus in burn cases, appendix or kidneys, or they may gain access to the body with the given causes of any infectious disease. Bacterial invasion through the blood, especially if the germs have the properties of selective localization, will certainly account for the occurrence of ulcers in the fetus and new-born; for the appearance in group form, and for the selection of infants who are marasmic and whose vitality is so low as readily to admit of the entrance of infections.

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Take of the juice of Bugloss, cleansed and purified at the fire, two ounces, white sugar, two drachms; mix them well together, and let the diseased party drink it every night on going to bed; and there will not ten days pass, but the party will be cured of the passion or grief of the heart. (Benedictus Victorius. *Empirica*.)

THE CLINICAL EXAMINATION IN CASES OF FOCAL INFECTION.

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Much has been written during the past few years upon the subject of the relationship of certain systemic and localized diseases of foci of infection located in various parts of the body. This has formed a very interesting field for the labors of the clinician, as well as the laboratory worker. The efforts of these men have not been fruitless, for much light has been thrown upon what was at one time one of the most obscure conditions in medicine. The limitation of the use of the words "rheumatic" and "idiopathic" is evidence of the result of practical and theoretic study in this field of bacteriology and pathology. It is not many years since the physician was willing to assert that certain obscure conditions were idiopathic (being at a loss for a better explanation of the cause), while today he does not rest content until he has discovered more tangible evidence as to the etiology of these diseases. Very frequently he finds that the explanation lies in the discovery of a nidus of bacterial growth in some favorable part of the anatomy, to which has been applied the term "Focal Infection".

This term includes a class of clinical conditions which result from the presence of bacterial localization in one or more organs. The latter are especially favorable to this form of bacterial growth, and include the tonsils, teeth, accessory sinuses of the nose, gall bladder, appendix, prostate. The organisms growing in these various localities acquire a certain "selective tissue affinity", which causes them to select particular tissues as points of secondary growth. The latter having become vulnerable to their invasion by variations in the local tissue equilibrium, such as vascular changes, in turn affect the local oxygen pressure, and hence the resistance of the tissue to bacterial growth. It is possible that unknown biochemical changes also occur in the invaded tissue favoring the growth of particular classes of germs.

There are two principal conditions which seem to determine the secondary localization of these organisms:

1. The character of the organism itself.
2. The disturbance of local tissue resistance.

The first is illustrated by the fact that a form of streptococcus is found frequently in the tonsils, and in inflammatory foci in the endocardium in acute endocarditis. The streptococcus of acute articular rheumatism is frequently marked in cultures from the tonsils and joints in this disease. This seems to prove that the streptococcus acquires definite "selective affinity" for endocardial and articular tissue. It is not unusual to observe the direct relationship of chronic sinusitis and joint disease, chronic appendicitis, cholecystitis, prostatitis and chronic joint kidney and muscular (myositis) disease.

The disturbance of the local tissue resistance may be brought about by injury, strain, local congestion from exposure to cold, and in fact anything which would tend to change the vascular condition. This materially interferes with local metabolism and increases susceptibility to bacterial invasion. It is reasonable to suppose that over- or under-nutrition of an organ from whatever cause, would render it more favorable for the growth of organisms which have acquired affinity for its tissues.

We are not, however, concerned with the theoretical considerations of this subject here: but rather with a few important points in the matter of the diagnosis of these conditions.

Several cases of this nature have been observed by me recently but four of them are of particular interest.

CASE 1. J. K., a railway employee received a blast of sand in his face. Several grains entered the very superficial layers of his right cornea. They were removed and the eye treated in the usual manner. In a case of this nature one can logically expect to see some injection of the iris, particularly if the reaction was quite marked; but an actual severe inflammation of the iris is not to be expected, and is difficult to account for. This case however, presented a well established inflammation of the tissues of the iris on the third day. A thorough general examination revealed nothing. The tonsils were small and submerged, but showed no signs of infection. They were however, enucleated, because of their submerged position and the uncertainty of the presence of infection here. The iritis subsided completely by the 12th day.

CASE 2. Mr. T. had suffered with repeated attacks of sero-plastic iritis of the left eye for several years. The condition would yield to local treatment but always recur, sometimes within two or three months. Tonsillar involvement was the only positive physical finding which a thorough examination revealed and which could account for the persistence of this condition. These were removed and the operation was followed by a rapid resolution of the process.

CASE 3. A young man with paralysis of the left external rectus muscle, with all the symptoms well marked. The condition had begun from no apparent cause and when first seen by us had been of more than a week's standing. The physical examination showed nothing. The faucial tonsils were again suspected and removed. This resulted in complete cure within two weeks.

CASE 4. Also one of recurring iritis of the right eye. This case was of long standing. The only possible etiologic factor found was an infection of several dental alveoli. After the extraction of the diseased teeth and treatment of the alveolar condition great improvement of the eye was observed.

These cases simply serve as examples of some forms of metastatic infection, and it happened that the tonsils were at fault in three of them.

We are all well acquainted with the relation of chronic tonsil, ear, sinus, pharyngeal, dental, glandular, gall bladder, appendicial, pelvic infections and acute rheumatic fever, endocarditis, pyelitis, nephritis, chorea, pancreatitis, gastric and duodenal ulcer, certain skin lesions such as herpes and erythema nodosum, thyroiditis, osteomyelitis, spinal myelitis, meningitis, and iridocyclitis. Again, acute or chronic diseases may be caused by focal infection. Of the acute conditions, acute rheumatic fever, acute endocarditis, acute cholecystitis and acute appendicitis as well as acute iritis are examples; while chronic arthritis, endocarditis, nephritis, and iritis are the more important chronic conditions to be found.

All these facts have been brought out principally by the brilliant work of Drs. Billings and Rosenow. It is a very few years since their work was made public and what was at first met with scepticism is now almost universally accepted, so well was it supported by experimental and clinical data. As is usually the case with that which is new, many became over-enthusiastic and carried it to extremes, sacrificing tonsils and teeth whether normal or

not, in the presence of almost any diseased condition without first making careful search for the true causes. A conservative application however, of the facts established as the result of many investigations will be of decided advantage to every practitioner no matter what branch of medicine or surgery he may practise.

If we will follow as much as possible, in our study of each case of this nature, the methods used by the original investigators in their clinical observations, there is no reason why success will not be attained. A systematic examination of the patient is essential. No matter what the nature of the ailment under question, be it an eye condition or a joint infection, it demands that nothing be overlooked which could possibly be the cause. In conducting the examination it must be borne in mind that more than one focus of infection may be responsible for the condition, and we must not rest content if we find infected dental alveoli or any other single focus. Our examination should not stop there, for the gall bladder, the appendix or pelvis of the kidney, etc., may also form sources for the infection.

It is often found in the course of the history that the patient has been subject to a series of general symptoms of a more or less fugitive and indefinite nature. Occasional headaches, languor, constipation, afternoon rise in temperature, and diminished appetite are among the manifestations of toxin absorption in the presence of focal infection, and many of these symptoms render a patient susceptible to a diagnosis of tuberculosis. The occurrence of specific fevers such as scarlet fever and diphtheria favors the formation of infectious foci particularly in the throat. The history of attacks of suppurative otitis media, acute sinusitis, acute tonsillitis, acute inflammation of the appendix, gall bladder, etc., which have subsided without surgical interference may lead us directly to our chronically infected focus. So that the history here is of the utmost importance.

It is also necessary to eliminate the possibility of syphilis, tuberculosis and neisserian infection as causative factors. In doing this the more exact methods should not be neglected, viz.: Wassermann, subcutaneous tuberculin test and complement fixation test for gonorrhoea.

Bearing in mind the most probable points of bacterial localization, we can proceed with the physical examination.

The ears should be considered as the sites of possible chronic suppurative otitis media and mastoiditis. The frequent presence of organisms of the strepto-pneumococcus group in the discharge of these ears, implies that this condition is a frequent source of secondary infection and general disease.

The nasal accessory sinuses being frequently involved, require careful attention. All methods for arriving at a correct diagnosis should be employed. Trans-illumination and X-ray photography will often help. It should be borne in mind that chronic ethmoid or antral disease which has been fairly well tolerated by the patient for some time, may nevertheless, be the cause of secondary inflammation of a more distressing character.

The existence of chronic dacryocystitis may also be significant as the recent work of Drs. Brown and Irons has shown.

The pharyngeal tonsil (Luschka's tonsil, adenoids) should not be forgotten. This is particularly important in the young. The relationship of infection here, and acute hemorrhagic nephritis in infants and the very young has been repeatedly observed. Thornwaldt's disease of this structure also favors the occurrence of secondary focal infection.

The faucial tonsils have been held responsible for innumerable ailments, but their relation to focal infection is without question. This does not permit us to sacrifice tonsils unnecessarily. Simple hypertrophy does not always signify infection nor justify removal while the most innocent looking tonsil may be the most potent from the standpoint of secondary infection and general disease. The anatomical position of these organs and their peculiar structure render them of great importance in the localization of infection. This more than anything else accounts for the frequency of their involvement. As stated before, the anamnesis is of importance in considering their possible relation to the secondary infection. The specific fevers, particularly those involving the throat, frequent attacks of "colds", tonsillitis, and peri-tonsillitis, favor the establishment of chronic infection in these structures. Their appearance and that of the surrounding tissue may give valuable information of their condition.

1. They are not necessarily dangerous as foci of infection in proportion to their state of hypertrophy. A large tonsil is usually in a much better

condition for drainage than the small, fibrous, buried organ. Mere remnants of tonsils are not to be considered as incompatible with resident foci, but the reverse is frequently true.

2. On the other hand the persistency of the tonsils inconsistent with the patient's age is an evidence of their infection.

3. Adhesions or cautery scars are important in predisposing to chronic infection of the crypts. In this connection the sealing scar following tonsillectomy may be mentioned. Here the fundi of the crypts are closed cavities as the result of the healing process following their partial destruction.

4. Zones of redness about the tonsils and frequently in the anterior pillars may also be significant.

5. Associated chronic inflammation of the pharyngeal mucosa particularly when showing marked lymphoid hypertrophy is of importance.

6. Enlargement of the cervical lymphatic glands draining this region is an index of the infected condition of the tonsils. This is an extremely valuable sign in our search for the dangerous tonsil. Tenderness associated with the glandular enlargement implies a more active and more virulent infection.

An examination of the teeth should be made by the dental surgeon. Frequently they are reported free from disease, but it is always advisable to corroborate these findings with Rontgenograms (dental X-ray films) for every dentist will admit that it is often difficult to determine the presence of deeply seated alveolar infection by inspection alone.

A searching examination of the chest, abdomen, and pelvis is essential.

Infected peribronchial lymph nodes, chronic bronchitis, and bronchiectasis should be especially looked for.

In the abdomen, the appendix, gall bladder, pelvis of the kidney have been most frequently observed as foci of infection.

And in the pelvis, the prostate and seminal vesicles; the Fallopian tubes and ovaries as well as chronic parametrial infection form frequent sources of trouble.

The relationship of the more obvious conditions such as subacute or chronic cutaneous infections, osteomyelitis and pleural inflammation to secondary infection is without question.

In considering the pelvis of the kidney as the source of disease, it may often be necessary to employ the more thorough methods of diagnosis. A bacteriological examination of the urine as well as separate catheterization of the ureters may be indicated.

It is therefore seen that the diagnosis is one made by exclusion. All possible sources of infection should be considered and one by one excluded until we find the true location of the trouble. The source of infection being thus ascertained, its removal, together with proper local and medicinal measures will usually bring about happy results as exemplified by the cases previously mentioned.

In view of the importance of clinically localizing these infections, it seems to me that no method which will aid our diagnosis should be omitted no matter how inconvenient to the physician or patient. True, many patients will object emphatically to so tedious a process, but when we consider the great importance of removing the cause, for instance, of a severe intraocular inflammation, and we impress this fact on the subject, there is usually no difficulty in obtaining the patient's co-operation.

Before closing this brief consideration of the clinical examination in cases of focal infections, permit me to emphasize the value of team work on the part of those conducting the examination. It is essential in many cases that the Ophthalmologist and Oto-laryngologist secure the aid of the Internist and Surgeon, as well as the Dental Surgeon and Rontgenographer. The opinion of these various individuals must be given proper weight. And on the other hand it is frequently necessary that the general physician and surgeon have the opinion of those engaged in special study. This is especially true since the smallest focus of disturbance may be brought to light by one trained for certain work, while it would be overlooked by another. All the consultants must work in harmony, believing in the good will of the other, observing every professional courtesy, and having only one subject in view—that of placing the patient in the best possible physical condition. The dentist must not be ready to convict the teeth as the cause of all disease, nor must the Oto-laryngologist place the burden on the sinuses or tonsils. I believe that we can look forward to more efficient co-operation of the various practitioners, especially since this field of work will necessitate joint efforts, if good results are going to be had. To use the

words of Dr. Irons, "The readjustment in the methods of diagnosis and in the establishment of a rational conservatism will come gradually as we learn to appreciate the interdependence of all the organs of the body and the community of interest of all engaged in the practice of the various branches of Medicine and Surgery."

ABSTRACTS

PERLECHE. J. E. Lane, New Haven, Conn., (*Journal A. M. A.*, July 21, 1917), writes on perleche, a disease chiefly of infants and children, though it may occur in adults. He has found it to be quite common in New Haven as well as elsewhere. Its first appearance in medical literature was in 1885, when it was described by Lemaistre, who gave it its name, though it had been already known under various designations in Germany and Italy. It is an affection of the labial commissures, usually bilateral and limited. As it progresses, it extends toward the center of the mouth and also on the skin and mucous membrane. In the beginning it is smooth and whitish with mother of pearl tinge, but as it progresses the epithelium becomes macerated and a little thickened and loses its pearly tinge. Small transverse fissures appear with a red base and the lips are stretched but they do not bleed readily. There is little or no inflammatory area adjoining. Occasionally a little of the pellicle can be detached. It is never an ulceration or accompanied with swelling as far as Lane has observed. As the lesions begin to heal the disease retrogresses and approaches the early lesion, and after the roughness has disappeared there is only a slight discoloration for a month or so. If treated it can be cured in two or three weeks, but if left to itself it may take a month or more and in some cases its duration is indefinite. Mild cases produce no symptoms other than those described. As regards its etiology Lane finds that the streptococcus is the only bacterium that is always present, but there may be other less essential factors in the staphylococcus, etc. It is highly contagious and common drinking utensils are the most frequent vehicles of infection, but it may be spread by kissing, pencils, handkerchiefs and towels. The diseases likely to be confused with it are herpes labialis, eczema, stomatitis and syphilis, but no careful observer would have to consider more than the latter as it greatly resembles the mucous patch. The more general occurrence of syphilis should be considered, however, it is never confined to the mucous membrane of the mouth. The prophylactic measures are those already indicated and painting the lesions daily or every other day with a 10 per cent. solution of silver nitrate or a diluted tincture of iodine and a copper sulphate or alum pencil will promptly cure. Antiseptic mouth washes are rarely needed.

The soles of the feet anointed with the fat of a dormouse, doth procure sleep. (Aetius.)

GOUT AND INFECTIOUS ARTHRITIS. In two clinical lectures, in the International Clinics for June, H. A. Christian considers the differential points between Gout and acute and chronic Arthritis.

There are three types of Gout:

First, obvious depositions of urates in the bone or in the cartilage, or in both.

Second, in which that does not occur, but in which there are chronic arthritic changes, with exostoses and associated atrophy of the cartilage, etc., sometimes with depositions of urates in the soft parts around the bone, adjacent to the bone, but not in the bone.

Third, very little change in the joints, inflammatory change in the soft parts, but no obvious deposition of urates in the soft parts about the points or in the bones or cartilage. In all three types depositions of urates in the ear occur giving typical tophi that are easily recognized.

In regard to the value of Uric Acid Metabolism studies, Christian points out that we are dealing with a substance which is present in the blood and in the urine in relatively very small quantities. Anything present in small quantities brings up the possibility of error in its determination. In the second place, we are dealing with a substance which in the blood is very difficult of quantitative demonstration, and there is still a question as to whether the methods available are satisfactory; or, to put it another way, other substances than uric acid may cause the same calorimetric changes which are used by Folin in his method of determining the uric acid.

In regard to the X-ray he states that we are justified in calling Gout only those cases in which there is the typical punched-out area in the bones with thickening in the bony substance around the area.

POLIOMYELITIS H. L. K. Shaw, Albany, N. Y. (*Journal A. M. A.*, July 21, 1917), gives the points brought out by the study of poliomyelitis as it occurred in New York State outside of New York City, covering a study of 4,186 cases reported to the New York State Department of Health from June to December, 1916. The age incidence in the state differed somewhat from that in the city, as 55 per cent. of the cases were under 5 years of age as compared with 90 per cent. in New York City, where poliomyelitis was almost exclusively a disease of childhood. This fact is explained by Frost as probably due to the comparative immunity of the adult urban population, due to mild and perhaps unrecognized attacks in their early years. In the rural districts there had probably been less exposure in former years and the immunity was therefore not acquired. The mortality among the 4,186 patients was 866 or 21.1 per cent., as compared with that of the City of New York of 27.2 per cent. In New York City 79 per cent. of the total deaths were of patients under 5 years of age while in the up-state cities there deaths constituted 59 per cent., and in the rural sections 45 per cent. In the rural sections of the state 19 per cent., or nearly one out of five deaths occurred in patients over the age of 16. The popular term "infantile paralysis" is therefore a misnomer. The period of incubation as shown by a study of 756 cases to

determine the date of paralysis after the first sign of acute symptoms was: 68.7 per cent. within three days; 79 per cent. within four days; 95.7 per cent. within seven days; and 98 per cent. within ten days. The incubation therefore may be said to be between three and ten days. If a child who has been exposed does not develop symptoms within two weeks it can be considered safe. A most important point about which no reliable information has been given is the length of time a patient having poliomyelitis can transmit the disease and thus be a menace to others. The data studied to determine this point were obtained from reports sent to the department by physicians and sanitary supervisors. It was necessary to include in this study only those cases where the date of onset was positively established and a definite date when the secondary case was exposed. The results are given in tabulated form and it would seem that the longest period a primary case was actually observed to be infectious was eight days, and in most cases it was one or two. A number of cases were reported in which the attack of the disease was claimed to be only one or two days after exposure, but not all of these were included as it was felt that in many instances the infection was simultaneous with that of the so-called primary case. The conclusion drawn is that for the protection of public health a period of quarantine of three weeks would give ample and sufficient protection. This is the rule of the health authorities of Washington, D. C., and of the state of Wisconsin. It is a generally accepted fact that direct contact is the mode of infection and this is the view Dr. Simon Flexner recently expressed. Studying the spot maps made of the cases as reported in the state from week to week is sufficiently convincing.

CARREL'S METHOD. W. O'N. Sherman, Pittsburgh, (*Journal A. M. A.*, July 21, 1917), gives a history and description of the method used by Dr. Alexis Carrel for the prevention or abortion of infection. The description of the method, which he says has been met with scepticism and neglect in many quarters, largely by others than American surgeons, is detailed. Credit is also due to Daufresne for the latest and most successful modification of the solution used, to which, however, Dakin's name is the only one usually applied. In order thoroughly to master the method Sherman thinks one should spend at least three weeks observing the treatment. He also gives some space to the use of the method in wounds other than those of war. He has had excellent opportunities to study the various methods of wound treatment used in the base hospitals. Practically every wound seen by him, except those treated by Carrel's method, was infected. Many of the wounded men were sent to their homes with existing latent infection present. Carrel's method he says is a proved specific and all military and civil surgeons and nurses should receive three or four weeks' instruction in its use.

Women that use to lie and sleep on their right side, seldom or never bring forth female children. (Rhazes.)

THE WISCONSIN MEDICAL JOURNAL

OFFICIAL PUBLICATION OF THE STATE MEDICAL SOCIETY OF WISCONSIN

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Annual Subscription - - - Two Dollars; Single Copies - - - Twenty-five Cents

Address all business communications to THE WISCONSIN MEDICAL JOURNAL, 504 Goldsmith Building, Milwaukee

Vol. XVI.

August, 1917

No. 3

EDITORIALS

THE ANNUAL MEETING.

THIS year the State Society will inaugurate the new system of Sections. It is unfortunate that we must start at this time when many of our men will be away with the various forces but we must make the best of the situation and endeavor to carry it through successfully in spite of the handicap.

The meeting will be held at Milwaukee early in October. The Committee of Arrangements has notified us that the sessions will be held at the Hotel Wisconsin.

Those who contemplate the presentation of papers should notify the program committee so that the assignment to the section or general session may be made at the earliest date.

We want this first sectional meeting to be a great success. Only the men themselves can make it a success. So let every one do his bit.

WILL OUR YOUNG DOCTORS WAIT TO BE DRAFTED?

WISCONSIN is no exception to the rule. Complaint comes from every section of the country that the younger physicians, many of them with no family or other obligations, and the class to be most benefitted by the experience to be obtained in the military hospitals at home and abroad, are failing to respond to the call to the colors.

The average age of volunteers for the Medical Reserve Corps is forty years. Where are our

younger men? It is hard for us to believe that the younger physicians of Wisconsin are less patriotic than the older, but it is nevertheless a fact that few of the younger men are coming forward with their applications to the Medical Officers' Reserve Corps. It is also a curious fact to note that the men in the larger cities are not doing their share. Many of our country communities have been left without medical men, while many of our larger centers of population could easily spare one-third of the physicians practising and not feel the loss of scarcely a man.

Are our city brothers less patriotic than the men who are needed to do the country work?

YOU MUST DECIDE.

OUR country is at war. Every member of this Association has been fully advised as to the pressing need for additional medical officers. THE JOURNAL has no desire to devote additional space to the emphasizing of this need. Whether or not you enlist now or later is a matter which you must decide for yourself and be guided by your conscience. Until the government resorts to some form of conscription for medical officers (which is not unlikely) you alone must decide where you can be of maximum value to your country. Many of our members are needed at home more than at the front, for the health of our civilian population must be conserved. But, if your circumstances permit your service at the front without too great sacrifice of dependents, your duty is very clear. A crisis not to be compared with anything in the history of the world is at hand.

KEEP THE JOURNAL GOING.

YOUR Editor reports an empty desk so far as papers are concerned. This is the first time that such a state of affairs has happened since he took hold. Possibly the times are not conducive to the quiet study necessary to write something worth while. If all feel as your Editor does, then all feel as if you were under tension, working at top-speed, without any idea of what will happen tomorrow. In such an atmosphere composition is stilled. However, we need articles badly. We need good ones, too. We want to keep the stand-up. Cannot the JOURNAL rely upon the loyal support of its readers and owners?

 A NEGLECTED AID IN DIAGNOSIS.

THERE was a time ages ago when certain functions of the animal brain in our ancestors were highly developed. Our forbears then were making use of all the sense organs in the struggles for existence. Our domestic pets and their cousins the wild animals still retain functions which are but poorly developed in their superior, man. Man found that he could do without certain sense organs, or rather, that his superiority in the use of other organs made him master, so that he did not have to depend upon certain sense organs essential to the struggle of the lower animals.

Man had his thinking brain developed at the expense of his sense organs and the special sense organ, which underwent the greatest change was that of smell. We marvel at the keen sense of smell shown by animals, a bewildering, highly developed function which is beyond our ken.

We use our eyes, our ears, our sense of touch and our thinking brain to arrive at our diagnosis in medicine. We are carefully trained from our childhood to make the most of these functions. Except to distinguish between pleasant and unpleasant, pungent, acrid, nauseating smells, our sense of smell is let severely alone. This seems unfortunate for us. We lose the use of a most important sense organ.

At first thought it sounds a trifle far-fetched to affirm that diseases have their own peculiar odors, but a moment's reflection will convince anyone that a person with an open, running sinus due to tuberculosis emits a very definite and unforgettable

smell. Almost any nose, unless grossly diseased itself, will be able to detect this smell. The surgeon who opens an abdomen from which foul-smelling pus flows knows at once the difference between the smell of colon pus and that of streptococcus pus. These familiar instances could be multiplied, all tending to prove the contention that every disease due to the action of an infectious agent upon tissue produces its own peculiar smell. Granting that this is true for the moment, isn't it plain that our own limitations are all that stand in the way of a valuable aid in diagnosing disease?

Certain common diseases are known to have a distinctive odor. For example, smallpox is unmistakable to one who knows it. Typhoid fever has a curious odor, known as "mousey." Nurses in a large hospital soon learn to recognize the smell and frequently aid the physician in arriving at a diagnosis. Diphtheria is said by certain of the older observant physicians to emit a very distinctive odor enabling them to distinguish between that disease and follicular tonsillitis by the smell alone. Malaria has its own smell. Recently an observer has said that acute anterior poliomyelitis is recognizable by a peculiar and distinctive odor. General peritonitis has its particular odor. The cancer patient in the late stages has a characteristic odor and who can say that the odor is not there early in the course of the disease? It is said that Hodgkin's disease has its own smell. Even incipient tuberculosis gives a characteristic odor which is diagnostic in many cases.

Undoubtedly other diseases caused by agents which grow in the tissues and produce constitutional symptoms have their peculiar odors did we but have the sense of smell developed to be able to recognize them.

This is nothing new. As far back as one can go in the history of Medicine, one finds statements concerning the odors of diseased persons. Hippocrates has much to say on the subject. Galen writes about it, in fact, scarcely any of the old masters neglected to call attention to the distinctive odors met with in different diseases.

Odors cannot be classified and can be but roughly described. To one an odor is fetid which to another is nothing but mildly unpleasant. There is no way to learn to recognize the various differences in odors except actual personal contact with the patient and demonstration then and there. That much can be learned we are sure. That we have

sadly neglected this aid to diagnosis is true. Until all teaching is done at the bedside by skilled clinical teachers we shall continue to lose an important help in diagnosis and keep our hippocampal gyri in an atrophic condition.

TRENCH SANITATION.

OUR own medical journals are beginning to reflect the military spirit which now permeates all phases of our life. All articles dealing with military sanitation have naturally a great interest for us now.

Quite recently in *Jour. Amer. Med. Assoc.*, July 14 and 17, appeared a very interesting article on "Sanitation in the Trenches" by Lieut. Col. McCulloch. He describes fully many methods of removing refuse, garbage, disposal of excreta and other problems relating to the health and comfort of soldiers in the trenches.

We recommend the perusal of this article to all physicians. It is very illuminating and answers many questions which many have undoubtedly been asking themselves.

THE FALLACY OF CLINICAL REPORTS.

WE doubt if there is any physician in the land who has escaped the ubiquitous detail man from some large drug house who with the over-confidence born of ignorance, talks glibly about the wonderful results of his firm's new drug, in 1,000 cases.

The "literature" (?) he displays and points to with great aplomb bears out his boasting statements. We turn nonchalantly to the testimonial pages and see the wonderful reports of cases. We find names of men who never wrote a line in any journal, whose reputation is at best purely local, who have never been trained in a rigid discipline of scientific thought. Some may have had three cases; the majority report, "One Case Successfully Treated by Bunco, the New Intestinal Antiseptic." If this is exaggeration look at the reports the next time the detail man comes your way.

Granted that there are reports of clinical studies on 1,000 cases, 95 per cent of which show successful action of Bunco, did it ever occur to you to pause and analyze the results even superficially? One

thousand cases treated by eight hundred men, not one of whom is known to you. There are no control cases, no long series of observations, no attempt to evaluate the results on a scientific basis. No wonder clinical reports and clinical experiments are looked at askance. Experimentation on animals is difficult although one can, with more or less accuracy, check results by large numbers of controls. In human experimentation the problem is infinitely more complex chiefly because of the almost insuperable difficulty found in controlling the conditions of the experiments and in procuring adequate controls.

These thoughts were inspired by a recent article by Dr. Torald Sollmann entitled "The Crucial Test of Therapeutic Evidence." He remarks at length on the fallacy of clinical reports and pleads for more careful work.

"The final and crucial test of a remedy is on the patient; but the test must be framed so as to make it really crucial. Most clinical therapeutic evidence falls far short of this."

URGENT NEED FOR 17,000 MORE ARMY DOCTORS.

The Government's Official Bulletin of June 16th contains the following from Surgeon-General Gorgas:

"The Medical Corps must have 17,000 more doctors for the Army, and it needs most of them now. In Germany when the army has such a call the Government orders the doctors to join the colors, and that is all there is to it. This Government is loath to follow that example. Doctors coming into the Medical Reserve Corps are commissioned as first lieutenants, captains, or majors in the service, and are liable to be ordered to any duty required of their grade. The Surgeon-General's endeavor is to put each man where he is most needed and where his specialty will count most.

FOREIGN SERVICE THE ATTRACTION.

"Foreign service is the attraction, and it will eventually fall to most of the corps. The examination of recruits and the care of their health through treatment and in a much broader way by sanitation is the matter of earliest importance, and it will be the first duty of the new medical officers.

"The United States needs more medical officers than France or Germany, because, through lack of universal military training, the difficulties of examining recruits will be multiplied many times, and because we wish to aid our allies and also give the best service to our own soldiers and sailors.

"The country needs more doctors now that they may be trained in military ways, in sanitation, and the surgical methods developed by Dr. Carrel and other surgeons since the war began.

QUALIFICATIONS REQUIRED.

"An applicant must be a graduate of a reputable medical school, and be between 22 and 55 years of age. The annual pay of a lieutenant is \$2,000; of a captain, \$2,400; of a major, \$3,000; with an additional 10% in each case for foreign service besides quarters. Any physician who intends to join the Medical Officers' Reserve Corps should communicate with the chairman of the board most convenient to him.

"Never has there been a greater demand for sacrifice, but it is the sacrifice for country. The country is in the war to win, and no class is more needed at the present time than doctors.

CONDITIONS IN ENGLAND.

"The surgeons of England and France need help both at home and in the field.

"English physicians have given themselves to the army so freely,' says Col. T. H. Goodwin, R. M. C., 'that in some of the more populous districts there is but one physician for 6,000 people left in England.

"The English surgeons have worked desperately. They frequently, after great military engagements, keep their boots on for a week at a time, working 14 and 16 hours a day. But they have learned their lesson; and where at the war's inception they detailed 20 medical officers and assistants to care for the sick and wounded in 500 beds, now with the aid of two more officers they give equally good care to a thousand.'

"Col. Goodwin, who has been through the war, beginning with the first expedition to France, and the great retreat from Mons, has been detailed to lend his great experience to the United States Medical Corps, and he unfalteringly advises the greatest possible number of medical officers at the

earliest date. He flatly contradicts the story that 60,000 English doctors have lost their lives in the service, the total loss not being 2% of that number. There are only 12,000 surgeons in the English Army."

PRELIMINARY PROGRAM

STATE MEDICAL SOCIETY OF WISCONSIN.

Milwaukee, October 3, 4, and 5, 1917.

GENERAL SESSIONS.

OCTOBER 3, 2 P. M.

1. Address of the President, Hoyt E. Dearholt, Milwaukee.
2. Septic Sore Throat, Galesville Epidemic, I. F. Thompson, Eau Claire.
- 3.
4. Address on Medicine, F. M. Allen, Rockefeller Institute, New York.

OCTOBER 4, 2 P. M.

5. Spasmophilia—Some Clinical Cases, W. E. Bannen, La Crosse.
6. The X-Ray Findings in Lesions of the Stomach and Duodenum, Francis B. McMahon, Milwaukee.
7. The Importance of Cystoscopic Examinations in Pathological Conditions of the Pelvis and Lower Abdomen, V. F. Marshall and J. B. Lengard, Appleton.
8. Address on Surgery, Fred H. Albee, New York.

OCTOBER 5, 9 A. M.

9. C. H. Lemon, Milwaukee.
10. Health Insurance, Alexander M. Lambert, New York.
11. The Medical Profession and the War. Franklin H. Martin, Chicago.

OCTOBER 5, 2 P. M.

Tuberculosis Clinic at Muirdale Sanitarium.

12. (a) H. K. Dunham, Cincinnati, Diagnosis with Interpretation of X-ray Findings.
- (b) J. S. Evans, University of Wisconsin, Clinical Demonstration of Cases. Physical findings to be checked up by Dr. Dunham.
- (c) O. W. McMichael, Chicago, Diagnosis of Tuberculosis by Palpation.
- (d) Wm. S. Miller, University of Wisconsin, Relation of the Lymphatics of the Lung to Tuberculosis.
- (e) Harry Cohn, Muirdale, Demonstration of Alpine Light Treatment.

Surgical Section.

OCTOBER 3, 9 A. M.

1. History of Goitre, H. M. Brown, Milwaukee.
2. Differential Diagnosis of Forms of Goitre, J. F. Pember and T. W. Nuzum, Janesville.
3. Operative vs. Non-operative Treatment of Goitre, E. V. Smith, Fond du Lac.
4. Operative Technique in Treatment of Goitre, R. G. Sayle, Milwaukee.
5. A Plea for More Thorough Operations on the Biliary Tract, (Illustrated with Motion Pictures.) D. N. Eisendrath, Chicago.

OCTOBER 4, 9 A. M.

Symposium on Fractures.

6. Operative vs. Closed Method of Treating Fractures, A. H. Levings, Milwaukee.
7. Advantages and Disadvantages of Metallic Bone Plates in the Treatment of Fractures, Carl Doege, Marshfield.
8. Bone Grafting in the Treatment of Fractures, F. J. Gaenslen, Milwaukee.
9. The Relation of the X-ray to the Diagnosis in the Reduction of Fractures, J. H. Jackson, Madison.

Medical Section.

OCTOBER 3, 9 A. M.

1. Organization.
2. Acidosis: From a physiological-Chemical Viewpoint, Chester J. Farmer, Milwaukee.
3. The Modern Treatment of Diabetes, H. H. Milbee, Marshfield.
4. Sodium Cyanide as a Respiratory Stimulant. Demonstration, A. S. Lovenhart, W. F. Lorenz, H. G. Martin, and J. Y. Malone.

OCTOBER 4, 9 A. M.

5. Election of officers.
6. The Interpretation of the Wassermann Test, O. H. Foerster, Milwaukee.
7. The Vaccine Treatment of Typhoid Fever, L. M. Warfield, Milwaukee.
8. Epidemic Poliomyelitis. Lantern Slide Demonstration, J. W. Nuzum, Chicago.

Eye, Ear, Nose and Throat Section.

OCTOBER 3, 9 A. M.

1. Chairman's Address, G. I. Hogue, Milwaukee.
2. General Impressions and Treatment of Senile Cataract, Harold Gifford, Omaha, Neb.
- 3.
4. Industrial Eye Injuries and Their Prevention, Nelson M. Black, Milwaukee.

OCTOBER 4, 9 A. M.

5. Differential Diagnosis in Throat Lesions, E. F. Bauer, Milwaukee.
6. The Present Status of Tonsil Removal, H. B. Hitz, Milwaukee.

7. The Results of a Deviated Septum, and the Operative Technique, C. G. Dwight, Madison.
8. The Present Status of the Hay Fever Question, Franz Pfister, Milwaukee.

SIX WAR COUNCILS TO MEET IN FALL

The six sectional conferences to be held in October and November this year will be of unusual importance due to the war situation. It is evident thus early that there will be need for serious discussion of many new problems with which anti-tuberculosis workers have been confronted. Exactly what these problems will be cannot be foretold at this date, but the National Association is planning to devote as many sessions as will be necessary to discuss tuberculosis as a war problem. By October the new National Army will probably be in camp, and the plans of the army medical authorities for safeguarding the health of the recruits will be known. The action taken on recommendations of the special committee of the National Association and the sub-committee on tuberculosis of the General Medical Board, Council of National Defense, will also be known, as will be the measures effected to diagnose cases of tuberculosis among those drafted for the army. State and local associations will be ready to report on measures undertaken and contemplated. The sectional conferences, therefore, will be councils of war to decide on future programs and methods.

Every anti-tuberculosis worker in the country ought to plan to attend the conference with which his state is allied. Each association, at the next meeting of its board of executive committee, should vote to pay the expenses of at least one representative to his conference. The National Association urges that this be done immediately so that arrangements to attend may be made as far in advance as possible and the National Association notified of the number of persons who will attend.

The conferences will meet as follows: The New England Conference in Rutland, Vermont, October 4th and 5th; the North Atlantic Conference in Baltimore, Maryland, October 18th and 19th; the Southern in Chattanooga, Tennessee, November 9th and 10th; the Mississippi Valley in St. Paul and Minneapolis, Minnesota, October 8th, 9th and 10th; the Northwestern in Portland, Oregon, October 15th and 16th; and the Southern States at the Grand Canyon of Arizona, October 22d and 23d.—Bull. N. A. S. P. T., July, 1917.

WHAT THEN IS ACIDOSIS?

Evidently a condition lacking necessary connection with the production of oxybutyric acid or with the magnitude of the hydrogen ion concentration in blood; still less a condition involving the existence of acid in the blood. It is often characterized by high urinary ammonia, but sometimes this quantity is low; the concentration of carbon dioxide in the alveolar air is commonly low, but one can not feel sure that this is invariably the case; in acidosis the oxygen capacity of

the blood seems to be generally diminished, but we do not yet understand this subject well enough to be sure that compensatory changes may not take place. Upon the whole I think that we come nearest to certainty if we say that acidosis must involve a depletion of the body's alkali reserves, and specifically a depletion of the bicarbonate of the blood. So long as this has not taken place the pathological condition can not amount to much, so far as the acid-base equilibrium is concerned; when this defect is established the whole chain of causation, involving breathing, oxidation, nitrogen metabolism, renal activity and so on, has been set in motion.

The cause of the condition may vary widely. It may be due to the production of acid, or the ingestion of acid, or to lack of alkali in the food; it may be due to failure to eliminate acid, *e. g.*, acid phosphate, or to failure to produce and eliminate ammonia; but so far as can be seen it must always involve at least a diminution in the concentration of bicarbonate in the blood. As a practical maxim, we are therefore fully justified in saying that acidosis is a state of diminished bicarbonate in the blood. *L. J. Henderson, Science.*

SCABIES. Among the cases shown by Hartzell in a skin clinic at the University of Pennsylvania was an example of Scabies. While Scabies is a common condition it often goes unrecognized and still more often is imperfectly treated. Scabies and pediculosis are the only two itching diseases that may be "caught". Small family epidemics are of frequent occurrence.

Hartzell points out, in the International Clinics for June, that the diagnosis is to be made from the fact that the disease is contagious and that it shows a predilection for certain regions.

In very young children the palms and soles are often affected. In adults the sides of the fingers, the flexures of the wrist, the anterior axillary folds, the breasts in women and the shaft of the penis in men. An itching desire situated in these regions is almost certain to be Scabies. Close examination will show a few small, dotted, sinuous lines or burrows which are absolutely pathognomonic of Scabies.

Ten or twelve per cent. sulphuric ointment is an efficient remedy but is too irritating for infants and young children. Hartzell recommends for the latter equal parts of styrax and olive oil, or one or two drams of balsam of peru to the ounce of vaseline. Whichever remedy is employed it should be rubbed in from the neck to the end of the toes and fingers on three or four successive nights. This should be followed by a bath and then wait for three or four days to see whether the treatment has been successful and to avoid producing a dermatitis. If unsuccessful the treatment is repeated. All members of the family must be treated.

PRIMARY CARCINOMA OF THE GALL-BLADDER IN A YOUNG ADULT. An example of this rare condition is reported, in the International Clinics for June, by T. McGrae.

The patient was a young man, age thirty years, who entered the hospital because of illness dating back five

months. The trouble began with pain in the right side, loss in weight. Jaundice appeared about three weeks after his admission to the hospital. Physical examination showed prominence of the surface veins of the abdomen and fulness in the epigastrium was due to a firm mass with a distinct edge which came within 1 cm. of the navel in the mid-line. The mass extended to the left beneath the left costal margin opposite the ninth rib. To the right it passed under the right costal margin and in the nipple line is felt below the costal margin on deep inspiration. The mass was smooth and hard and presented no irregularities. The gall-bladder was not felt. As active anti-syphilitic treatment had been tried before his admission to the hospital and the Wassermann test was negative, syphilis was ruled out. A moderate leucocytosis was present and the red cells slightly reduced in number.

After considering the various conditions which might account for this tumor mass, loss of weight, jaundice, etc., the diagnosis was correctly made by exclusion. The conditions considered were. Hypertrophic biliary cirrhosis of Hanot; Syphilis; portal cirrhosis; abscess, cholangitis, angiocholitis, and neoplasm. The latter seemed the most probable diagnosis. This was confirmed by an exploratory operation and later by autopsy.

The majority of the cases of primary carcinoma of the gall-bladder are associated with gall stones, the figures varying from 75 to 100 per cent. The case reported belongs to the exceptions.

A CASE OF BOTULISM WITH BILATERAL PARALYSIS OF SPHINCTER OF IRIS AND MUSCLE OF ACCOMMODATION. Hoëg, Niels, (*Hospitalstidende*, 1915, p. 300, Abstract in *Centralblatt für praktische Aug.*, 40, p. 146), examined a patient who after eating preserves a few days previously, suddenly fell ill with severe headache, vomiting, blurred sight, constipation and dryness of the throat. The sphincter of iris and muscle of accommodation of each eye were completely paralyzed. There was dry pharyngitis, dryness of the skin, emaciation and loss of strength. In the course of a few months the symptoms disappeared, first the constipation, then the eye effects, while the sensations of dryness and emaciation lasted for a long time. The affection was ascribed to botulism. *C. Z.*

BUTTERMILK FEEDING AND KERATOMALACIA. Rönne, H., (*Ugeskrift for Læger*, 1915, p. 493, Abstract in *Centralbl. f. pr. Aug.*, 40, p. 148), gives statistics on 35 cases of Keratomalacia which shows that it is a marked seasonal disease with a maximum in May, none in summer. According to R. xerosis of the conjunctiva affects children almost exclusively nourished with carbohydrates, but also, especially in late years, those fed with buttermilk, apparently because buttermilk is more frequently than formerly ordered by physicians in dyspepsia. If the dyspepsia is improved the parents of their own accord continue with the buttermilk until xerosis sets in. The prognosis is good if the children come in time under treatment, which consists in unmixed raw milk. *C. Z.*

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7th Dist., Edward Evans - La Crosse
8th Dist., T. J. Redelings - Marinette

TERM EXPIRES 1922
11th Dist., J. M. Dodd - - Ashland
12th Dist., D. J. Hayes - - Milwaukee

Delegates to American Medical Association

H. M. BROWN, Milwaukee

ROCK SLEYSER, Waupun

T. H. HAY, Stevens Point

Alternates

W. E. BANNEN, La Crosse

T. W. NUZUM, Janesville

M. R. WILKINSON, Oconomowoc

Committee on Public Policy and Legislation

EDWARD QUICK, Milwaukee, Chairman

J. P. McMAHON, Milwaukee

L. H. PRINCE, Madison

Committee on Medical Defense

G. E. SEAMAN, Milwaukee, Chairman

S. S. HALL, Ripon

A. J. PATEK, Milwaukee

Committee on Health and Public Instruction

W. F. ZIERATH, Sheboygan

J. M. BEFFEL, Milwaukee

EDWARD EVANS, La Crosse

Program Committee

EDWARD EVANS, La Crosse, Chairman

NEXT ANNUAL SESSION, MILWAUKEE, OCTOBER, 1917

The Wisconsin Medical Journal, Official Publication

LIST OF EXECUTIVE OFFICERS OF COUNTY MEDICAL SOCIETIES.

Table with 3 columns: County, President, Secretary. Lists medical society officers for various Wisconsin counties including Ashland, Barron, Brown, Calumet, Chippewa, Clark, Columbia, Crawford, Dane, Dodge, Door, Douglas, Dunn-Pepin, Eau Claire, Fond du Lac, Grand, Green, Greu Lake-Washara-Adams, Iowa, Jefferson, Juneau, Kenosha, La Crosse, Lafayette, Langlade, Lincoln, Manitowoc, Marathon, Marinette-Florence, Milwaukee, Monroe, Oconto, Oneida-Forest-Vilas, Outagamie, Ozaukee, Pierce, Portage, Price-Taylor, Racine, Richland, Rock, Rusk, Sauk, Shawano, Sheboygan, St. Croix, Trempealeau-Jackson-Buffalo, Vernon, Walworth, Washington, Waukesha, Waupaca, Winnebago, Wood.

SOCIETY PROCEEDINGS

DODGE COUNTY

A meeting of Dodge County Medical Society was held on June 15, 1917, at Minnesota Junction. Dr. C. H. Stoddard, Milwaukee, spoke on "War Problems for the Medical Profession".

DUNN-PEPIN COUNTY.

Dunn-Pepin County Medical Society held its regular monthly meeting June 27th at the Hotel Royal at Menomonie. The meeting was called to order by the president, Dr. A. F. Heising. A majority of the members were present. A carefully prepared paper was read by Dr. I. V. Grannis on "Glaucoma, Its Cause and Treatment". The secretary was instructed to order a copy of "Nostrums and Quackery" from the A. M. A., to be placed on the shelves of our local library.

Dr. G. C. Nedry was elected to fulfill the vacancy caused by the resignation of Dr. I. V. Grannis as secretary. The next meeting is to be held at Colfax, in honor of our colleague, Dr. L. A. Larson of that place.

G. C. NEDRY, M. D., *Secretary.*

GRANT COUNTY

A meeting of Grant County Medical Society was held at Fennimore, on Friday, July 6th, 1917. After a fine dinner at the Fennimore House, the regular meeting was held at the State Bank. Owing to unfavorable weather there was not a large attendance. Dr. J. A. Jackson, Jr., Madison, read a paper on "The Value of the X-ray in the Diagnosis and Treatment of Fractures". It was illustrated by a number of excellent plates, showing the value of this work in these cases. It is becoming necessary that the physician make use of these aids, not only to secure the perfect results he wishes for his patients, but for his own protection against malpractice suits as well. A vote of thanks was extended Dr. Jackson for his excellent paper. A number of interesting clinical cases were reported by the physicians present. There were present Drs. J. C. Betz, E. H. Spiegelberg, Emil Ruka, F. S. Tuffley, C. W. Palmer, F. H. Baldwin, M. A. Bailey, T. H. Marsden, E. C. Howell, D. Barber, A. B. Bailey, J. A. Jackson, Jr., and M. B. Glasier.

M. B. GLASIER, M. D., *Secretary.*

WASHINGTON-OZAUKEE

A joint meeting of Ozaukee and Washington County Medical Societies was held on Friday, July 6th, 1917, at the office of Dr. Coerper, Fredonia. Program: "The Control of Communicable Diseases," Dr. E. V. Brumbaugh, Milwaukee. "The Secretions of the Ductless Glands," Dr. G. A. Hipke, Milwaukee.

WAUKESHA COUNTY

Dr. L. A. Youmans, Mukwonago, was host to the Waukesha County Medical Society, at its monthly meeting on

July 13th. A 6 o'clock dinner was served at the Park Hotel. Much of the time of the meeting was taken up in discussing the national army draft and the call of medical men to war service.

TRI-STATE DISTRICT MEDICAL SOCIETY.

The Tri-State District Medical Society extends a hearty invitation to the doctors of Wisconsin to be present at its annual scientific and clinical meeting to be held at Dubuque, Iowa, September 4-5-6. The doctors' wives and ladies are also cordially invited to be present.

Dubuque is providing a live ladies' entertainment committee as we feel that this meeting will not be a success without the presence of the whole session and particularly to attend the banquet at its close (this includes the ladies).

Dubuque is prepared to welcome us with all her well known hospitality and the Program of the meeting which follows is so solid and attractive that it may reasonably claim the attention of every medical man in this and surrounding territory. It is not often permitted us to hear and meet personally such a galaxy of stars of the first magnitude as appear among the names on the Program. You simply can't afford to miss such a magnificent treat. "A word to the wise is sufficient."

As has been well said, "Not only for scientific inquiry and discussion, but, also, to promote good fellowship and a true fraternal and professional spirit, let us come together for a good time."

PROGRAM COMMITTEE.

Dr. Lawrence H. Prince, Madison, Wis.

Dr. Wm. H. Perry, Sterling, Ill.

Dr. C. A. McGuire, Dubuque, Iowa.

Program of Tri-State District Medical Society.

First Day, September Fourth.

MORNING SESSION.

7:00 A. M. Clinics at Finley and St. Joseph's Mercy Hospitals.

9:30 A. M. Address of Welcome.

James Saul, Jr., Mayor of Dubuque.

Response to Address of Welcome.

Emil Windmueller, M. D., Councilor Illinois State Med. Society, Woodstock, Illinois.

10:00 A. M. The Child's and Adolescent's Heart; Pathological Sequelae.

Daniel Lichty, M. D., Rockford, Illinois.

Discussion—Dr. Paul E. Gardner, New Hampton, Iowa.

10:25 A. M. Symptoms and Diagnosis of Gall Bladder and Duct Disease.

H. A. Sword, M. D., Milledgeville, Illinois.

Discussion—Dr. I. N. Crow, Marengo, Ia.

10:50 A. M. Indications for and the Technic of the Administration of Blood.

E. S. Murphy, M. D., Dixon, Illinois.

Discussion—Open.

- 11:15 A. M. Parental Alcoholism.
L. R. Head, M. D., Madison, Wis.
Discussion—Dr. D. N. Loose, Maquoketa, Ia.
- 11:40 A. M. Abdominal Symptoms—Their Significance.
George Kessel, M. D., Cresco, Ia.
Discussion—Dr. Wilson Cunningham, Platteville, Wis.

AFTERNOON SESSION.

- 1:30 P. M. Prostatectomy Simplex. Another Plea in Conservation.
J. T. White, M. D., Freeport, Ill.
Discussion—Dr. J. E. O'Keefe, Waterloo, Ia.
- 1:55 P. M. Practical Consideration of Accessory Sinus Disease with Special Reference to Non-Operative Treatment.
Henry G. Langworthy, M. D., Dubuque, Ia.
Discussion—Dr. A. E. Sherman, Aurora, Ill.
- 2:30 P. M. Fracture of the Spine.
T. W. Nuzum, M. D., Janesville, Wis.
Discussion—Dr. C. L. Best, Freeport, Ill.
- 2:55 P. M. Newer Studies in the Prevention of Diphtheria with Special Reference to the Schick Test and Toxin-Antitoxin Immunization.
Henry Albert, M. D., Prof. of Path. and Bact., Iowa City, Ia.
Discussion—Dr. W. D. Stovall, Madison, Wis.; Dr. Guthrie McConnell, Waterloo, Ia.
- 3:30 P. M. Before the Operation and After.
L. W. Littig, M. D., Davenport, Ia.
Discussion—Dr. J. Forest Bell, Elgin, Ill.
- 3:55 P. M. Address in Surgery—Dr. A. J. Ochsner, Prof. of Surgery, University of Illinois, College of Medicine, Chicago, Ill.
Subject—Practical Hints Concerning Surgical After Treatment.

EVENING SESSION.

- 7:15 P. M. Address in Medicine—Dr. Victor C. Vaughan, Prof. of Hygiene and Physiological Chemistry, Ann Arbor, Mich.
Subject—Protein Poisons and Their Relation to Disease.
- 9:00 P. M. Charge of Entertainment Committee.
Address—Dr. C. W. Hopkins, Chief Surgeon, C. & N. Ry.
Separate evening entertainment is being arranged for the ladies by the Dubuque Ladies' Committee.
Second Day. September Fifth.

MORNING SESSION.

- 7:00 A. M. Clinics at Finley and St. Joseph's Mercy Hospitals.

- 9:30 A. M. Repair of Fractures (Illustrated).
A. Alguire, M. D., Belvidere, Ill.
Discussion—Dr. W. A. Munn, Janesville, Wis.

- 9:55 A. M. Medical Treatment of Affections of the Nose and Throat.
Grant W. Hatch, M. D., Rockford, Ill.
Discussion—Dr. W. B. Small, Waterloo, Ia.

- 10:20 A. M. A Simple Drainage Apparatus for the Continuous Vacuum Treatment of Empyema of the Pleural Cavity.
J. J. Grant, M. D., Freeport, Ill.
Discussion—Dr. Robt. White, Prairie Du Chien, Wis.

- 10:45 A. M. Address in Surgery—Dr. Edward Ochsner, Chicago, Ill.
Subject—A Specific for Every Pathological Micro-organism, The Ultimate Goal of Surgery.

AFTERNOON SESSION.

- 1:30 P. M. Present Status of Blood Pressure.
G. E. Crawford, M. D., Cedar Rapids, Ia.
Discussion—Dr. Wm. T. Lindsay, Madison, Wis.
- 2:00 P. M. Address in Medicine—Dr. Wm. A. Pusey, Prof. of Dermatology, Univ. of Illinois, College of Medicine, Chicago, Ill.
Subject—A Critical Consideration of Some of the Present Problems in Syphilis.
- 3:30 P. M. Address in Surgery—Dr. Fred H. Albee, Prof. of Orthopedic Surgery, New York Post Graduate Medical Schools, New York, N. Y.
Subject—Plastic Bone Surgery, with Special Application to War Surgery (Illustrated by motion pictures).
- 5:00 P. M. Post Operative Oil Embolism—Its Symptoms, Etiology and Prevention (Illustrated by Vitograph).
Karl F. Snyder, M. D., Freeport, Ill.

EVENING SESSION.

- 6:00 P. M. Luncheon for the Doctors and Their Ladies followed by Entertainment—probably boat ride on the Mississippi. In charge of the Dubuque Entertainment Committee.
Third Day. September Sixth.

MORNING SESSION.

- 7:00 A. M. Clinics at Finley and St. Joseph's Mercy Hospitals.
- 9:30 A. M. Direct Laryngoscopy.
F. W. Broderick, M. D., Sterling, Ill.
Discussion—Dr. L. Ostrom, Rock Island, Ill.

- 9:55 A. M. Fracture of the Spine with Presentation of Case.
W. P. Slattery, M. D., Dubuque, Ia.
Discussion—Dr. Geo. P. Gill, Rockford, Ill.
- 10:20 A. M. Address in Surgery—John B. Deaver, Professor of Surgery, Medical Department, University of Pennsylvania.
Subject—(To be announced later).

AFTERNOON SESSION.

- 1:00 P. M. Some Difficult Diagnostic Surgical Problems Illustrated by Cases).
D. R. Connell, M. D., Beloit, Wis.
Discussion—Dr. B. A. Michel, Dubuque, Ia.
- 1:25 P. M. Gastroptosis.
J. W. MacDonald, M. D., Aurora, Ill.
Discussion—Dr. P. A. Bendixen, Davenport, Ia.
- 1:50 P. M. The Use of Sodium Cyanide as a Respiratory Stimulant.
A. S. Loevenhart, M. D., Madison, Wis.
Discussion—Open.
- 2:15 P. M. A Defense of the Obstetrical Forceps.
Wm. L. Allen, M. D., Davenport, Ia.
Discussion—Dr. H. A. Brennecke, Aurora, Ill.
- 2:40 P. M. Diagnosis and Treatment of Pyloric Stenosis.
H. M. Orr, M. D., La Salle, Ill.
Discussion—Dr. C. A. Waterbury, Waterloo, Ia.
- 3:10 P. M. Address in Surgery—Dr. Charles H. Mayo, President A. M. A., Rochester, Minnesota.

EVENING SESSION.

- 6:30 P. M. Banquet for Doctors and their Ladies.
Hotel Jukan.
- Toastmaster, Dr. Arthur Dean Bevan, Prof. of Surgery, Rush Medical College, Chicago, and Pres.-Elect of the A. M. A.
- Addresses and Toasts:
- Dr. Arthur Dean Bevan.
Hon. William L. Harding, Governor of Iowa.
Hon. Emanuel L. Philipp, Governor of Wisconsin.
Hon. Frank O. Lowden, Governor of Illinois.
Dr. Charles H. Mayo, President of the A. M. A.
Dr. H. E. Dearholt, President, Wisconsin State Medical Society.
Dr. J. N. Warren, President, Iowa State Medical Society.
Dr. E. B. Cooley, President, Illinois State Medical Society.
Dr. J. B. Deaver, Prof. Surgery, University of Pennsylvania.
- Leaders of Special Discussions during Sessions:
- Iowa—
Dr. T. B. Throckmorton, Sec. Iowa State Medical Society, Des Moines.
Dr. James R. Guthrie, Dubuque.
Dr. David S. Fairchild, Jr., Clinton.

Wisconsin—

- Dr. Rock Sleyster, Sec. Wisconsin State Medical Society, Waupun.
Dr. C. R. Bardeen, Dean of Medical College, University of Wisconsin, Madison.
Dr. John F. Pember, Janesville.

Illinois—

- Dr. E. W. Fiegenbaum, Pres.-Elect, Illinois State Medical Society, Edwardsville.
Dr. Jeremiah H. Stealy, Freeport.
Dr. August H. Arp, Councilor, Illinois State Medical Society, Moline.

CHAIRMAN OF MEETINGS.

President.

- Dr. G. E. Crawford, Dr. Henry Albert, Dr. W. A. Rohlf, Dr. Paul E. Gardner.
Councilors of Iowa State Medical Society.
Dr. Emil Windmueller, Dr. Edwin S. Gillespie, Dr. August H. Arp.
Councilors of Illinois State Medical Society.
Dr. M. R. Wilkinson, Dr. Wilson Cunningham, Dr. F. T. Nye, Dr. G. Windesheim.
Councilors of Wisconsin State Medical Society.

NEWS ITEMS AND PERSONALS.

MAJOR GILBERT E. SEAMAN, chief surgeon, Wisconsin National Guard, has recently returned from a tour of inspection and observation of military hospitals and camps in Canada.

DR. J. A. PALMER, Arcadia, has received a commission in the Medical Officers' Reserve Corps, ranking as 1st Lieutenant.

DR. F. A. WALTERS, former mayor of Stevens Point, has been appointed a captain in the Medical Officers' Reserve Corps.

DR. ARTHUR McCARY, Green Bay, is commissioned a 1st Lieutenant in the Medical Officers' Reserve Corps.

LIEUT. G. L. BELLIS, superintendent of Muirdale, Milwaukee County's Tuberculosis Sanatorium, has sailed for France with a contingent of American physicians, who are members of the medical reserve corps.

DR. EDGAR C. BARNES has been appointed major in the medical corps, and assigned to the Fourth Regiment, Wisconsin National Guard.

DRS. J. S. FOAT, Ripon and A. C. DANA, Fond du Lac, have received commissions in the Medical Officers' Reserve Corps.

Smallpox has developed in Company I, First Wisconsin Infantry, in camp at Beloit.

Medical officers and line officers of the Wisconsin National Guard are furnished a compendium for medical officers, prepared by Major G. E. Seaman, Milwaukee, under direction of the Adjutant General's office. The book contains quotations from laws and orders relating to the medical service with "compilations of information and of comment based on personal experience."

The Rev. C. B. Moulinier of Marquette University, has received the following notification, in regard to draft of medical students from Dr. Victor C. Vaughan, chairman of the committee on legislation for the advisory commission of the National Council of Defense:

"Replying to your telegram of July 3, addressed to Dr. Franklin Martin, I have to advise that the surgeon general has authorized me to state that medical students will not be exempted from draft, but medical students will be given conditional and limited furloughs to continue their medical studies."

Dane County Medical Society on July 26 gave a God-speed banquet to the doctors who have enlisted for war service. The guests were: Major W. F. Lorenz, Lieutenants James Dean and C. A. S. Gunderson of Madison; M. H. Draper of Deerfield, and R. B. Thompson of Reedsburg, all connected with the hospital corps. Drs. H. A. Keenan of Stoughton and Norman O. Nelson of Madison, who have joined the Medical Reserve and Dr. S. Blanton of Madison, who is connected with the neurologic unit. Drs. W. S. Middleton and R. Drane of the University Clinic are already in the service in France.

DR. T. J. McCrory, Racine, has been appointed physician to the State Athletic Commission.

DR. FRANCIS BARTHOLOMEW McMAHON, Milwaukee, has been granted the degree of master of science in surgery by the University of Minnesota.

DR. WILLIAM L. THOMPSON, Sheboygan, for eight years a member of the State Board of Medical Examiners, retired from the Board at its meeting recently held in Milwaukee.

DR. E. A. MORSE, Appleton, on July 1 retired from active practice. He has been a member of the medical profession for thirty years, and for the past several years, has been senior member of the firm of Morse and Rector.

DR. JAMES C. SARGENT has opened offices in the Wells Building, Milwaukee, and will limit his practice to urology. Dr. Sargent was formerly an associate at the Brady Urological Institute, Johns Hopkins Hospital.

The physicians of Colby have organized a corporation, known as the Colby Medical Association. The members of the firm are: Drs. H. H. and A. M. Christofferson and A. L. Schemmer. A building has been remodeled and modern appliances installed.

The International Health Board of the Rockefeller Foundation announce the personnel and the preliminary plans of the Commission for the Prevention of Tuberculosis in France, which is being sent abroad as the result of a report on conditions made by Dr. Hermann M. Biggs, a director of the Foundation's War Relief Commission. Dr. Livingston Farrand, president of the University of Colorado, and for ten years executive secretary of the National Association for the Study and Prevention of Tuberculosis, heads the commission. The others are: Dr. James Alexander Miller, president of the Association of Tuberculosis Clinics in New York City; Homer Folks, secretary of the State Charities Aid Association, in charge of tuberculosis relief of the American Red Cross in France, who will be able to co-ordinate the work of the two organizations, and Prof. Selskar M. Gunn of the Massachusetts Institute of Technology. Herman G. Place will be Dr. Farrand's secretary.

The Bureau of the Census is planning to prepare and publish a monograph on the Mortality from Tuberculosis covering the calendar year 1918. To make this work of greater value, an endeavor is being made to obtain the co-operation of all physicians to the extent of carefully recording or supervising the statements of occupations upon the death certificates during that year.

Dr. Pearce Bailey of New York, chairman of the committee on furnishing hospital units for nervous

and mental disorders to the United States Government, a sub-committee of the National Committee for Mental Hygiene, has been invited by the Surgeon General of the United States Army to accept a commission as major and to come to Washington as personal advisor to the Surgeon General in all matters pertaining to psychiatry and neurology. Major Bailey is now on duty in the Surgeon General's office. Dr. Frankwood E. Williams, associate medical director of the National Committee for Mental Hygiene, has been appointed Vice-Chairman of the committee and placed in charge of the work in the New York office.

The city hospital committee, River Falls, has found popular sentiment so strongly in favor of erecting a new hospital, that architects are now being consulted for estimates. The price of shares is placed at \$25 each.

Unless the Loofbourow hospital is opened to patients in the near future, Drs. R. B. Clark and W. G. Bear, will erect a hospital at Monroe.

Plans are being laid for a campaign, early this fall, to raise \$300,000 for an addition to St. Elizabeth's Hospital, at Appleton.

The Dominican Sisters have been presented with five acres of land on the lake shore, near Kenosha, and will erect a hospital on the site.

The Lakeside Methodist Hospital Company, Oshkosh, has been incorporated to operate a hospital and training school for nurses. Sixty members form a tentative board of control, of which five groups of twelve members each serve for terms of from one to five years. Dr. W. N. Linn, Oshkosh, is a director.

Contracts have been let for building the foundation and first floor of the Ashland General Hospital. The General Hospital is the outcome of a campaign waged last January for a Protestant institution in Ashland. The goal, \$40,000, was reached, and property purchased costing \$20,000, including several acres of ground.

St. Luke's Children's Hospital, a new department of St. Luke's Hospital at Racine, has been opened by the board of managers. It has a capacity of ten beds.

The first annual report of the county board of administration of Milwaukee County, shows that the county institutions cost \$880,700 last year. The most expensive institutions to run were the hospital for the insane, the county hospital and the asylum for the chronic insane, which cost the county \$111,073.27, \$105,497.95 and \$105,464.33 respectively. Part of the cost of the insane institutions, however, is borne by the state.

A proposition under which the Carnegie foundation would assist in a \$1,000,000 endowment of the medical school of Marquette University, was formally presented to the officials of the University at a recent gathering. The offer came through Dr. Henry S. Pritchett, president of the Foundation. Under it, the Carnegie institution will endow the school in the sum of one-third of a million dollars if the University raises the other two-thirds by July 1, 1918. The Rev. Moulinier, regent of the University, states that the time has come when money must be secured, or the school must be discontinued. He said that it has been running on a deficit of from \$15,000 to \$20,000 a year.

The National Board of Medical Examiners held its second examination in Washington, D. C., June 13 to 21. There were twenty-four qualified candidates, twelve of whom appeared for examination, the others having been ordered into active duty between the time of their application and the date of the examination. Of the twelve who took the examination nine passed.

The next examination will be held in Chicago, October 10 to 18. The regular Corps of the Army and Navy may be entered by successful candidates, without further professional examination, providing they meet the adaptability and physical requirements.

There will also be an examination in New York City in the early part of December.

REMOVALS

Dr. O. B. Lambert, Algoma to Calumet, Mish.

Dr. G. A. Ribenack, Colfax to Almena.

Dr. W. G. Hyde, Racine to Milwaukee.

Dr. J. Hanley, Kenosha to Military Training Camp, Ft. Riley, Kan.

Dr. George Smith, Peshtigo to Hortonville.

Dr. M. Surenson, Viroqua to Prairie du Chien.

Dr. G. A. Gunderson, Madison to Deerfield.

Dr. F. O. Brunckhorst, Hortonville to Kewau-
nee.

Dr. A. H. Kulig, Dodge to Independence.

Dr. N. B. Wagner, Port Edwards to Racine.

Dr. George Martin, Baldwin, has retired from active service, and located at Balsam Lake, where he will conduct a drug store.

Dr. S. G. Pake, for a number of years located at Superior, has removed to Hayward, where he takes charge of Dr. James A. Ballard's practice, Dr. Ballard having joined the Army.

DEATHS

Dr. Albert H. Hoy, a former Racine physician, died on June 12th at London, England, where he had resided for the past few years.

Dr. James Louis Williamson, Milwaukee, died on July 16th, aged 61 years. Graduate of Northwestern University School, Chicago, 1881, formerly a Fellow of the American Medical Association, a member of Milwaukee County and the State Medical Societies.

Dr. Samuel Birbeck, Gratiot, died suddenly on July 3rd, aged 50 years. He was a graduate of the College of Physicians and Surgeons, Keokuk, Iowa, 1898, a Fellow of the American Medical Association, a member of LaFayette County and the State Medical Societies.

Dr. Oscar Houck, La Crosse, died on June 12th, of pernicious anemia, aged 57 years. Dr. Houck was a graduate of Jefferson Medical College—class of 1896. He was formerly a member of the American Medical Association, the Wisconsin State Medical Society, and an honorary member of the La Crosse County Medical Association.

MARRIAGES

Dr. Edward J. Purtell and Miss Antonette Krubsack, both of Milwaukee, on July 1.

Dr. Dexter Witte, Waukesha and Miss Margaret Habegger, Watertown, on July 8th.

Dr. Lyman Alden Capps and Miss Stella Bernice Murat, both of Stevens Point, on July 31.

Dr. Homer McClelland Carter and Miss Eleanor Hardy Keller, both of Madison, July 16th.

Dr. Fred B. Welch, Janesville and Miss Elsie May Douglas, Covington, N. Y., June 20.

OTOGENOUS INTRACRANIAL COMPLICATIONS WITH OPTIC NEURITIS, WHICH HEALED WITHOUT INTRACRANIAL OPERATIONS. Mygind, H., (*Ugeskrift for Laeger*, 1915, p. 1286. Abstract in *Centralbl. f. pr.*, Aug. 40, p. 148), reports on 4 cases of purulent otitis media with partial affection of the labyrinth, complicated with optic neuritis. In all, indefinite signs of intracranial complications (headache, vertigo, vomiting, etc.) were found, but they recovered without operation. M. thinks with Koerner, that especially the cases of diffuse, purulent otogenous meningitis with favorable course are accompanied by optic neuritis. C. Z.

ON HEREDITARY TRANSMISSION OF THE COLOR OF THE EYES. Stören, (*Tidskrift for den Norske Laegeforening*, 1915, p. 553. Abstract in *Centralblatt für praktische Aug.*, 40, p. 146), examined the color of the eyes of individuals of the same sex, frequently in three generations. In seven families, in which both parents had brown eyes, five boys had blue, seventeen boys brown, six girls blue, ten girls brown, eyes. Also in families, in which both parents had blue eyes, in a series of cases children with brown eyes were found, even in a case where both parents and all four grandfathers and grandmothers had blue eyes. Hence no constant rule for hereditary transmission of the color of the iris seems to exist. C. Z.

Whosoever is anointed for the Neapolitan disease (commonly called the French pox), if he hold in his mouth a ring of gold, and rolls the same about with his tongue, the quicksilver that is in his body, by the means of the ointment is drawn of the said gold, and is so wrapped about the said ring of gold, that when it is taken out of the said mouth, shall seem as though it were all silver. And the same ring of gold will not be restored to its former brightness or color, except it be put in the fire. (Levinus Lemnius.)

DEPARTMENT OF NURSING

Conducted by Miss Stella Fuller, 566 Van Buren St., Milwaukee, Wis. Please address items of news and articles for this department to the editor of the department.

OUR PRESENT DUTY.

WE are living in big days, rousing, stirring days that should bring out the best that is in us. As Doctors and Nurses we cannot help feeling proud of the fact that no class of men and women are more honored, more needed, and more used than we are today. We are ready to answer the call to services whether it is to go abroad or to remain in our places at home, but the demand for doctors and nurses is greater than the supply and it is our duty to help fill up the schools. We read of this need, and think of it in a general way but we do not think of influencing the young men and women whom we know, our friends, and our relatives.

Not a paper is printed now-a-days that does not mention food conservation. Through this extensive publicity we wasteful Americans are learning to save. Only through constant mention of the lack of physicians and nurses and by urging our own people to join us in the conservation of the health of the nation, shall we increase our numbers.

A NEW MOVEMENT.

DURING the past year Miss Lucy Helen Pearson, a former Y. W. C. A. worker in Wisconsin, has organized what is known as The Student Women's Christian Fellowship of Chicago. Chicago has nearly one hundred special and professional schools which admit women, with an attendance of 50,000 women students. Every student woman in Chicago has a right to all the privileges and responsibilities of the Fellowship. There are no dues, necessary operating expenses are met by voluntary contributions. Small circle meetings, as well as huge mass meetings are held from time to time. These meetings are attended by pupils from the art school, from teachers training schools, music schools, from training schools for nurses, etc. These young women are of many different religious faiths. The purpose of the Fellowship is simple, it is an effort to establish the ideals of Christian womanhood.

Do we not need something of this sort in our

training schools for nurses in Wisconsin? It is a fact that however faithful the probationer may have been to church duties, she gets away from them soon after entering the hospital. The hours are irregular, the work is hard, and Sunday soon gets to be much like every other day except that the nurses wear clean uniforms and there is ice cream for dinner!

Doctors, as well as nurses, are said to give little time to thoughts of the Christian life. Is it because they are too busy or is it because they are just careless?

SPECIAL PUBLIC HEALTH NURSING PROBLEMS LIKELY TO BE CREATED BY THE WAR.*

BY MARY E. LENT,

ASSOCIATE SECRETARY, NATIONAL ORGANIZATION FOR PUBLIC HEALTH NURSING.

The necessity for greater effort in all lines of public health nursing is being felt as conditions caused by the war develop. The call for treatment of the soldiers and their families, the nursing of disabled soldiers, the devising of ways and means for protecting women and children in the homes and in industry, the teaching of economy of food, and the maintenance of standards of living, bring us to the grim reality of the responsible part nurses are to play in this great struggle. The country has a right to ask its soldiers to lay down their lives in the hope that the sacrifice will bring about great good in giving freedom to all nations, but no country wants to expose either its soldier or civilian population to unnecessary loss of life and health.

The most striking lesson that has been taught is that health and sanitation are important and fundamental factors in preparedness for war as well as for peace. The greatly increased recognition throughout the world of the nurse's work through the progress of the whole public health movement has been still further augmented by the war, and has created a demand for this service which has opened, for educated women wanting useful and

*This paper may have been printed in some of our Nursing Journals, but there can be no objection to its use here in order that it may be more widely read by Wisconsin physicians.—*Editor.*

satisfying work, a field broader than is now offered in any other line of social work.

Adequately trained nurses are today one of the country's greatest needs, because just as in the case of doctors, it is necessary to safeguard the welfare of the soldiers in the trenches in addition to that of those left at home. Hence, almost double the number are needed. With the many bread winners leaving the homes, infant mortality, undernourishment in both children and adults, and many other complications will arise. In many cases the mothers will be forced out of their homes to work, thereby neglecting the health and care of their children, and the prenatal and infant care of their babies. The importance of prenatal and maternity nursing care has been brought out most emphatically by Dr. Meigs of the Children's Bureau, who says that in 1913, fifteen thousand women died from conditions caused by childbirth and about seven thousand of these died from child bed fever, and the remaining eight thousand from preventable diseases; and that there were more deaths of women between fifteen and forty-five years of age from this cause than from any other except tuberculosis.

If, in times of peace such figures are shown, we dare not think of what is occurring because of the war, and immediate steps to safeguard and protect the lives of women who are fulfilling this duty to the race seem imperative. With the public health nurse acting as the trained interpreter, we were just beginning to save the future American citizen through organized efforts of the medical profession, Health Departments, and the National Children's Bureau. These experienced women in the field of public health must answer this call for home defence in our great scheme of prevention and preservation, not alone to nurse disease, but to maintain health by removing the things which threaten it—ignorance in all matters by hygiene, lack of knowledge of food values, diet, sanitary laws and disease prevention.

Dr. Meigs also says that this problem should be considered as one which must be solved for all classes in a community, and that a unit plan for country care should include a rural nursing service centering at the county seat with public health nurses to report the danger signs of pregnancy. The establishment of such a service would undoubtedly be the most economical step in remediable measures for conserving human life. Because

of her often isolated position, the means of the rural mother for enlightenment and care in these most vital questions are pitifully limited, and in many cases in the most fundamental knowledge is lacking. She knows nothing of the diet regulations for the pregnant mother, or that the nursing mother requires even more special care and instruction in this respect than the pregnant mother. Her opportunities for reading are limited, and in many instances it is only through the services of the public health nurse that she has any knowledge of the simplest scientific facts.

We learn from those familiar with conditions abroad that any man with a limited amount of pulmonary tuberculosis is of course certain to suffer under the long physical strain of military training and service in army life, and if returned to their homes, particularly in isolated rural sections without proper supervision by public health nursing there is sure to develop conditions similar to those existing in France today, where it is safe to estimate that one-half of one per cent of the French army are suffering with tuberculosis.

From the farmer comes the means of physical sustenance for the military, industrial and domestic forces of the country, an enormous responsibility to place on one group, making it necessary for us to co-operate in every possible way. In this mad rush of events, we must not lose sight of the important part the farmer and his family play in this great struggle for world freedom. It is a well known fact, discovered by surveys made throughout the country that the farmer and his children are less healthy than his city brother. There is only a feeble beginning in any way to throw around the farmer the protection of modern public health methods. We have already told of the unnecessary sacrifice of the health and life of wife, mother and child during maternity. The untaught boy and girl are going on heedlessly, ignorant of the most simple laws governing health. In some sections almost medieval superstition holds back the progress of the community, and the most primitive sanitary conveniences are the rule.

Let us not forget that "the home field in war time is also a field of honor," even though it be in remote sections of the country; in other words, that the struggle is not just military; it is economic, social and industrial. Industrial preparedness is the one solid rock upon which any structure of military preparedness must be raised. We

all know that the history of our efforts to secure protection against accidents, to safeguard child labor, and to prevent the breaking down of human resistance against disease by long hours and other abuses against the physical welfare of our people is young and turbulent. The increasing demand upon our industrial resources under pressure of war conditions is bound to cause crowded conditions in our factories, increasing accident and disease, due to the many inexperienced operators, who, of necessity will be engaged. The temptation will be even greater than ever before brutally to brush aside all existing laws governing child labor, limitation of working hours for both men and women, and to let down the few bars so laboriously put up to conserve the strength and life of the workers.

It has been satisfactorily proven that the deplorable social conditions of the past are largely responsible for the physical condition of our industrial classes, and the exhausted and undernourished parents are populating the country with a frail and neurotic race, a condition which should not be tolerated by the American people.

There has been striking evidence of the value of the public health nurse in industry in those sections where the experiment has been tried. In reports from Chicago, St. Louis and Milwaukee, it has been shown that the service of the public health nurse has reduced time lost by sickness 40 per cent, thereby rendering a valuable dual service to the worker and the employer by raising the standard of efficiency in the industry, and maintaining a more regular budget in the home, thereby relieving the strain upon the community at large.

We have been looking forward most eagerly to a sane health insurance plan which in its administration will include the public health nurse as an important factor in its development—a marked addition made in bills introduced in Massachusetts, New York and California to that system so well worked out in European countries. It is difficult to say what the effect of the war will be on this great social program, but there can be no uncertainty about the greatly increased need of some such protection to all people of limited and moderate means.

To summarize, the war is intensifying every need for public health nursing which even in normal times was constituting an element of danger in our body politic. We now have tuberculosis and venereal diseases in the trenches and the homes.

We face maternal and infant mortality in appallingly increased measure because of the drafting of the wage earner and the mother in industry instead of in her home. We see the children anemic and neurotic because of undernourishment and enforced neglect. We recognize as never before the importance of safeguarding the farmer and his family because he is of all producers the most indispensable. Hence, the immediate need for health protection and education, sanitation and sickness are in rural as well as urban districts.

How can this need be met? What is being done to meet it? One answer is the public health nurse in greatly increased number. Dr. Biggs says, "In this time of war stress we realize more than ever how much community welfare depends upon individual initiative. If we as a public are to conserve our greatest war resources—the health of our people—the individual must realize the part that obedience to the laws of health plays in the working out of our united destinies. No one can bring this realization to the people who need it most, repeatedly and repeatedly as must be done, so well as the public health nurse."

There are approximately 100,000 graduate nurses, 70,000 of whom are registered in the United States. Of these there are only about 6,000 public health nurses. This number has been seriously inadequate under normal conditions to care for the 90 per cent of the sickness who do not enter institutions.

Educated women wishing to serve their country should take advantage of the opportunity of entering an accredited school for nursing. A National Emergency Committee on Nursing, consisting of Professor Nutting as chairman, Miss Goodrich, Miss Clayton, Miss Beard, Miss Lathrop, Miss Wald, Miss Delano, Miss Crandall, Dr. Welch, Dr. Biggs, Dr. Winslow, Dr. Smith and Dr. Goldwater, has started on its first piece of work by sending a letter to college women offering credit for an academic year in recognition of their courses in science, thereby reducing for them the course in nursing education from three to two years. This Committee will carry on an extensive program to secure suitable candidates from technical and high schools.

However urgent is the need for nurses, it is highly important that their training be adequate and complete. Short term courses for volunteer health workers or nurses' aids should be very care-

fully guarded. The false impression that young women get that they are going to be fully equipped through the short term course to render valuable service in the nursing field is not only unfair to the country, but is misleading to the individual seeking this service. There is of course a great opportunity in institutions and in the field for assistants to the nurses, if they are willing to pledge themselves for regular and definite work under the direction of graduate nurses.

Above all, we must have good order. Group organization is progressing, but the groups must be tied into a whole, fine, co-operating force, thereby eliminating wasteful competition. The question is always arising, What shall be done first, and in what locality? The answer should come from an expert priority board, which knows what the most urgent need is at any given time in any part of the country. There has been appointed a sub-committee on Public Health Nursing of the Committee on Hygiene and Sanitation of the General Medical Board of the Advisory Commission of the Council of National Defence, of which Miss Mary Beard, President of the National Organization for Public Health Nursing, is Chairman, and the members are: Miss Jane A. Delano, National Red Cross, Washington, D. C.; Col. Henry P. Birmingham, Surgeon General War Office, N. C. U. S. A., Washington, D. C.; Mrs. John H. Higbee, Naval Nursing Service, Washington, D. C.; Dr. John S. Fulton, Secretary Maryland Department of Health, Baltimore, Maryland; Assistant Surgeon General Stimpson, U. S. P. H. S., Washington, D. C. This committee will direct their energies towards working out the best possible means to afford the greatest protection that it is within the power of the public health nursing service to give to their country.

WHO'S WHO, AND WHY.

Florence Nightingale, born at Florence, Italy, in May, 1820, died in London in August, 1910.

Born in luxury and wealth this wonderful woman chose drudgery such as no nurse of the present time understands. "I had three paths from which to choose," she writes in her diary in 1850, at thirty years of age. "I might have been a literary woman or a married woman, or a hospital sister."

The story of the Crimean Expedition is well known. During the war, France, England and Italy fought Russia. In 1854 the English newspapers printed letters from their war correspondents showing the terrible suffering of the sick and wounded and the great need of

nurses in the War Zone. The only nurses who were on the battle-fields were the French Roman Catholic Sisters. England had no trained women.

In twelve days Florence Nightingale with forty women was ready to start for the front. For two years she worked in that fever stricken country, caring for the sick and dying.

On her return to England she wrote her book called "Notes Affecting the Health Efficiency and Hospital Administration of the British Army". This book is considered by many medical authorities to be the most valuable contribution ever made to hospital organization and administration in time of war. Through her pamphlet "An Address to India" sanitary conditions were much improved in India.

In 1859 she published "Notes on Nursing". She insisted always that preventive work must go hand in hand with nursing. Her idea was that "Nursing ought to signify the proper use of fresh air, light, warmth, cleanliness and quiet and the selection and administration of diet—all at the least expense of vital force to the patient."

She was greatly interested in what she called "Health Missioners". Our public health nurses are the result of her idea, no doubt.

She was an invalid for years but continued to do her work which was world-wide in its influence.

Longfellow wrote of her:
 "Lo! in that hour of misery—A Lady with a lamp I see,
 Pass through the glimmering gloom
 And flit from room to room
 And slow, as in a dream of bliss,
 The speechless sufferer turns to kiss
 Her shadow, as it falls
 Upon the darkening walls."

The lamp being the symbol for the light of knowledge which she shed. Today one of the medals of the Red Cross Society is the figure of the "Lady with the Lamp".

NEWS ITEMS AND PERSONALS

Miss Katharine Olmsted, former supervising nurse with the Wisconsin Anti-Tuberculosis Association, sailed from Vancouver on August 2d, for Roumania. Miss Olmsted is one of a party of doctors, sociologists, and nurses who are going as a special commission under the American Red Cross to give relief, and to make a survey of conditions in Roumania.

Mrs. Joseph Bradshaw and Miss Cora Nifer were re-appointed as members of the Nurses' Examining Board at the June meeting of the State Medical Examining Board.

Mrs. M. B. Northway, Superintendent of the Kenosha Hospital, was elected President of the State Graduate Nurses Association. The office was made vacant by the resignation of Miss Mary Good.

An Infant Welfare Society has been organized in Kenosha and has established a baby camp on the Lake Shore which can take care of twenty-five babies.

Miss Uda M. Kewenig of the Class of '17 Kenosha Hospital Training School is in charge of the camp.

The activities of the Red Cross Workers have somewhat abated through the extreme heat, but more than 5,000 pieces have been shipped from here.

Dr. Geo. H. Williamson, Neenah, has again taken up his work after a long illness.

Dr. C. C. Del Marcelle, Neenah, has received his commission as First Lieutenant and will go to Camp Douglas on the 4th Inst.

Miss Zorn assisted by Mrs. Lee, former school nurse at Neenah is administering justice and rations to seventeen happy little youngsters at the fresh air camp three miles from Neenah.

Mrs. Lee was a past master in commissary in the days of the Spanish American War, while at Chieamuga Park.

Mrs. Frederica Krueger Smith, Neenah, has recently returned from Washington, D. C., where she spent a week with her husband Dr. T. D. Smith before he sailed.

Miss Mathilda Krueger is spending her vacation at her home in Neenah.

The Class in Elementary Hygiene & Home Care of the Siek took their examination under Miss Krueger on July 23rd and are patiently awaiting returns.

Because of the scarcity of nurses in Wisconsin, the Wisconsin Anti-Tuberculosis Association has decided not to give the regular three months' course for Public Health Nurses this Fall.

More efficient supervision, encouragement and assistance, will be given nurses *already* doing visiting nurse work in order that they may be better able to meet the new problems resulting from the war.

District meetings of Public Health Nurses will be held throughout the state during the winter.

Miss Astrid Hofseth, Supt. of Maple Crest Sanatorium, Whitelaw, Wis., and Mrs. Mary Heiser, Supt. of Nurses at Nopeming Sanatorium, Nopeming, Minn., spent a part of their vacation in Milwaukee.

A French party was given to members of the French classes connected with the Milwaukee Base Hospital, at the Milwaukee County Nurses' Club, 566 Van Buren Street on August 2nd. The guests were required to speak French until 9:30, after which there was a cafeteria lunch and dancing.

CLIPPINGS FROM THE NEWSPAPERS.

Examiner at Red Cross Examination: "How would you prepare a sitz bath?"

Pupil: "Fill the tub with warm water and put in as much sitz as the doctor recommends. The amount of sitz to depend on size of the patient."

Experiences of another Red Cross pupil: All along, ever since this Red Cross examination was talked of, I have had several hunches with regard to what I would be asked. I said to myself, they will ask me to define streptococci, and how to make a mustard plaster, and how high a patient's fever ought to go. I do not know why I thought of these things, I just did. I got the mustard plaster recipe down pretty fine, though I would prefer not to administer it, to one near and dear to me, or for whose opinion I deeply care, and I had the fever degrees pretty well rounded up and had got so that I could define streptococci about five times out of seven. And they didn't ask me a doggone one of these things! One question was: give eight sources of contamination of milk, and I was just about to write down "eight flies", when I suddenly thought I had better not try to be funny, and wrote "Flies" in one place and left the other seven to the imagination of those who might come after. I think I answered part of one question right, as it was something about "what was the natural food for babies?" but as to the other fourteen I could not say, and it was consoling to think as I finished my paper that I could not be shot at sunrise for my ignorance; Oh well! One can still learn to drive an ambulance, but one will positively *not* learn to knit socks.

BOOK REVIEWS

TEXT BOOK OF FIRST AID AND EMERGENCY TREATMENT. By A. C. Burnham, M. D., Medical Corps, N. S. R., Instructor in Surgery in the Polyelinic Hospital, New York City; attending surgeon, Department of Surgery, Vanderbilt Clinic, College of Physicians and Surgeons, New York City. Illustrated with 160 engravings and two plates. Lea & Febiger, Philadelphia and New York. 1917. Price \$2.00.

Just at present there is considerable use for just such a book as Dr. Burnham's. In the great mobilization and concentrations throughout the country and in the large training camps, one of the important duties of the medical officer is the instruction of enlisted men of the Medical Department in First Aid. There are good books in use in the Army but this new book will be a useful auxiliary. It is a little difficult at first for a physician to lecture to enlisted men in language easy for them to understand.

The book clearly and simply sets forth the principles of first aid in emergencies of nearly all kinds. It is not pretentious but is simple and clear.

ASTHMA, presenting an exposition of the nonpassive theory by Orville Harry Brown, A. B., M. D., Ph. D., Thirty-six engravings. C. V. Mosby Co., St. Louis, 1917. Price \$4.00.

After a long and exhaustive review of nearly all of the important contributions upon the subject since the time of Hippocrates and Aretaeus, our author takes up the anatomy and physiology of the bronchi, lungs, and heart. Then he launches into an explanation of the cause of asthma, describing at length his theory that the

condition is caused primarily by actively forcible expiration but why one person is asthmatic and another is not and the real basal questions underlying the asthmatic constitution, are certainly not in the least explained. In fact, after carefully reading the entire book of some three hundred pages, the reviewer is bound to admit his knowledge of Asthma is increased not a whit. The book shows that a great deal of work and reading upon the subject has been done by the author and it is regrettable that the book is not of more importance.

THE STARVATION TREATMENT OF DIABETES with a series of graduated diets by Lewis Webb Hill, M. D., junior assistant visiting physician, Children's Hospital, Boston; Alumni assistant in Pediatrics, Harvard Medical School and Rena S. Eckman, dietitian, Massachusetts General Hospital, Boston, 1911-1916, with an introduction by Richard C. Cabot, M. D. Third edition. W. M. Leonard, Publisher, 1917. Boston. Price \$1.50.

This little book now in its third Edition is the very best manual we have seen to put into the hands of a diabetic patient. In this edition certain changes and additions have been made. The diet lists have been rewritten and emphasis is laid on less fat in the diets. The recipes are more numerous and a very valuable table of analysis of most of the diabetic flours is given at the end of the book.

This book can be highly recommended to physician and patient.

ROENTGEN TECHNIC. By Norman C. Prince, M. D., attending roentgenologist to the Omaha Free Dental Dispensary for children; associate roentgenologist to the Douglas County Hospital, Bishop Clarkson Memorial Hospital, Swedish Immanuel Hospital, St. Joseph's Hospital, and Ford Hospital, Omaha, Nebr., with seventy-one original illustrations. C. V. Mosby Co., St. Louis, 1917. Price \$2.00.

When almost every physician practising in the small towns has his own X-ray outfit and tries to take pictures, some means should be devised to assist him to do satisfactory work. This book seeks to supply the information necessary by text and illustrations. We miss some things which seem to us to be worth while, but on the whole it is a good introduction to the making of X-ray pictures and should be of great help to the amateur. No amount of book knowledge can make a successful radiographer. This is a technical procedure and one gains efficiency by actual doing. The illustrations in this book should save much time and many futile attempts, for they are good photographic representations of the chief positions for X-ray work. What little text there is is brief but to the point. Every illustration is accompanied by a description of the procedure in making the particular picture.

PHYSICAL EXERCISES FOR INVALIDS AND CONVALESCENTS. By Edward H. Ochsner, B. S., M. D., F. A. C. S., president Illinois State Charities Commission; attending surgeon, Augustana Hospital, Chicago. Illustrated. C. V. Mosby Company, St. Louis. Price 75 cents.

In this little volume the author has illustrated forty simple exercises without apparatus. They are designed to help convalescents to build themselves up, especially for orthopedic convalescents. There is nothing new in the exercise movements, but the convenient size of the book and the clearly described and pictured exercises make it easy for a patient to follow them.

CATARACT, SENILE, TRAUMATIC AND CONGENITAL. By W. A. Fisher, M. D., professor of Ophthalmology Chicago Eye, Ear, Nose and Throat College. Published by Chicago, Eye, Ear, Nose and Throat College, Chicago, Ill. 1917.

In this little volume from the pen of Fisher, the foremost exponent in America of the intracapsular cataract operation as practiced by Lieut. Col. Smith of India, we possess a very clear description of the operative technique of this operation, particularly of those modifications which Fisher himself has devised. These are mainly the special retractors for holding the lids away from the eyeball and the needle for delivering the lens if for any reason it becomes engaged in the corneal wound and loss of vitreous threatens. He goes into the literature on the subject in detail. The text is so clearly written and the illustrations so illuminating that the entire procedure can be very easily grasped from reading the book. He appends to the treatise the visual results in 94 consecutive operations done by this method.

The subject of traumatic and congenital cataract is very meagerly treated and this portion of the text does not compare in any way with that devoted to the senile cataract.

W. E. G.

EYE, EAR, NOSE AND THROAT. A manual for students and practitioners by Howard Charles Ballenger, M. D., professor of Oto-Laryngology in the Chicago Eye, Ear, Nose and Throat College; formerly Instructor in Otolaryngology, Rhinology, and Laryngology in the University of Illinois School of Medicine and attending Oto-Laryngologist to the West Side Free Dispensary, Chicago; Oto-Laryngologist to the Chicago Graduate School of Medicine, etc., and A. G. Wippert, M. D., attending oculist and aurist to St. Elizabeth's Hospital, Chicago; formerly Professor of Ophthalmology and Otolaryngology, Chicago Eye, Ear, Nose and Throat College; formerly assistant surgeon to the Illinois Charitable Eye and Ear Infirmary, etc. New second edition, thoroughly revised. Lea & Febiger, publishers, Philadelphia and New York. 1917. Price. \$8.50.

The second edition of this little manual on the diseases of the eye, ear, nose and throat, has been thoroughly revised and brought up to date. The arrangement and disposition of the subject matter is excellent. Combining as it does the entire field of ophthalmology and oto-laryngology this little volume is a very helpful manual for the student and practitioner. Naturally the treatment of the subject matter is too brief and the volume too compact for it to serve in any way as a reference work. The plates, figures and illustrations are quite numerous and helpful. The work can be strongly recommended as a manual.

W. E. G.

DISEASES OF THE GENITO-URINARY ORGANS AND THE KIDNEYS. By Robert H. Greene, M. D., Professor of Genito-Urinary Surgery at the Fordham University, New York, and Harlow Brooks, M. D., Professor of Clinical Medicine, University and Bellevue Hospital Medical College. Fourth edition thoroughly revised. Octavo of 666 pages, 301 illustrations. Philadelphia and London. W. B. Saunders Company, 1917. Cloth. \$5.50 net; half Morocco. \$7.00 net.

Urology is so closely related to general surgery and internal medicine that a book on Genito-Urinary Diseases written by an internist and a surgeon ought to possess distinct merit and the one under review written especially for the general practitioner does so.

Following the plan of European Urologists, Syphilis which is not a genito-urinary disease, except in its primary manifestation, has wisely been omitted.

The proof reading could have been done with a little more care and such evident errors as underly for *underlie*, *urorrhoea* for *urethrorrhoea*, by the ether method for by *either method*, cervical arch for *crural arch*, and the diplococcus *catarrhalis* is not decolorized by Gram's method would not have appeared, but it is not the function of a medical reviewer to apply criticism with an inch rule, nor does he intend to do so.

Attention is called to the important errors which should not have appeared, especially in a fourth edition.

The first quarter of the volume is devoted to a discussion of the essential factors entering into a urological diagnosis,—there are reviewed in a comprehensive manner with not too much attention to detail.

Many exceptions may be taken to the article on renal tuberculosis. The subject is vastly too important and too frequently overlooked not to be dealt with in a more vigorous and up-to-date manner.

Few surgeons will agree with the authors in saying that nephrolithotomy is not a very serious operation. It carries a mortality rate of about 20%. In speaking of renal stones, nothing is said about their most important classification into infected and non-infected cases, two-thirds of all renal calculi being infected. Bilateral renal stones are not mentioned nor is attention called to the advantages of pyelotomy over nephrotomy for the removal of the kidney stone when it is of suitable size and location.

In speaking of the diagnosis of hydronephrosis and of renal tumor pyelography is not mentioned. The endovesical removal of ureter stones, the method of choice is not mentioned. The removal of bladder papillomata by the high frequency current, which has superseded the open operation is mentioned but its importance is not sufficiently emphasized.

In speaking of suprapubic cystotomy, the authors say that the muscular aponeurosis underlying the pyramidal muscles should be cut through—there is no aponeurosis underlying these muscles as at the lower quarter of the rectus the aponeurosis does not split, but all goes in front of this muscle, again, they are in error in saying the peritoneum reaches the posterior aspect of the prostate—it does not extend so low in the pelvis. The "cut-off" muscle is the external urethral sphincter and not

the internal. The ducts of Cowper's glands empty into the bulbous and not the membranous urethra.

Toxines *are* formed by the gonococcus but the evidence is conflicting regarding the formation of anti-toxines.

Instead of internal urethrotomy being performed *only* when a stricture is at the bulbo-membranous juncture it should never be performed when a stricture is at this point unless external urethrotomy is done at the same time. The wood-cut of Maissonneuve's urethrotome indicates that the groove is on the convex surface and the cut is made on the floor of the urethra; the groove is on the *concave* surface and the cut is made on the *roof*.

The hot air treatment for chaneroids and the X-ray treatment for buboes are not mentioned.

In prostatic hypertrophy with retention, when the bladder has to be opened for the *retention* the authors advise removal of the prostate at the same time, a procedure which is rapidly being abandoned for the two stage operation which has been one of the main factors in the reduction of the mortality rate in prostatectomy.

E. A. F.

TRAUMATIC SURGERY. By John J. Moorehead, M. D., F. A. C. S. Adjunct Professor of Surgery in the New York Post-Graduate School and Hospital. Octavo volume of 760 pages with 522 original illustrations. W. B. Saunders Company, Philadelphia and London. 1917. Cloth, \$6.50 net. Half Morocco, \$8.00 net.

Moorehead's Traumatic Surgery comes to the profession just in the nick o' time. The American physician is lamentably lacking in knowledge when it comes to the surgery of accidents. The immediate prospect of years of this kind of service stares us in the face, and many of us are looking up a compact reference library to take abroad. I believe that a good anatomy and this surgery are about all the library that one will need.

To the doctor who has not seen much of this kind of work, there are hundreds of suggestions he will at once recognize as being just right. For special work in diseases and injuries of bones, for orthopedics, and in the paragraphs in roentgenology, there remains something to be desired, but as *this* work is to be done by specialists along those lines, the surgeon back of the firing line and in the hospitals will probably find that this book will prove very valuable.

UROLOGY: Diseases of the Urinary Organs, Diseases of the Male Genital Organs, The Venereal Diseases. By Edward L. Keys, Jr., M. D., Ph. D., Professor of Urology, Cornell University Medical College, Surgeon to St. Vincent's and Urologist to Bellevue Hospital. D. Appleton & Company, New York and London. 1917.

Doctor Keys' new edition of his book on the diseases of the genito-urinary organs, including both the elementary and the special and advanced methods of refined diagnosis and differential diagnosis of lesions of these organs, is indeed a very excellent one. It presents the subjects to us in a very logical, clear, and concise manner, making it a handy reference at any and all times on subjects both of ordinary and extraordinary interest

and occurrence. The author has displayed unusual judgment in selecting the important facts necessary to a good treatise of the many important and debated subjects which this branch of medicine and surgery includes, omitting thereby unnecessary and burdening details. He has brought out very well the important physiological and pathological conditions necessary for an understanding of symptoms and of rational treatment. Doctor Keys' book is divided into ninety chapters under six principal headings. It is well illustrated, containing two hundred and four illustrations in the text and eighteen plates, four of which are in colors.

PULMONARY TUBERCULOSIS. A handbook for students by Edward O. Otis, M. D., Professor of Pulmonary Diseases and Climatology, Tufts College Medical School. Boston: formerly visiting and consulting physician to the Massachusetts State Sanatorium (Rutland); fellow and former president of the American Climatological and Clinical Association; corresponding member of the International Tuberculosis Institute; consulting physician to the Boston Dispensary, tuberculosis department, etc. W. M. Leonard, publisher, Boston. 1917. Price \$1.75.

This little manual has surprisingly much meat in it. The author has culled the field well and has presented a brief but succinct résumé of the subject.

The reviewer thinks some points might have been more emphasized, but that is a matter of opinion. Dr. Otis does not mention the intradermal tuberculin test. This seems a real omission which in a second edition should be remedied.

He has written this book for students in medical schools. It should be of great help to them. Especially should the case histories in the last chapter bring forcibly home to the student the important fact of the insidiousness of pulmonary tuberculosis and the further fact that a ruddy appearance is not positive evidence that a person is as well as he looks.

BOOKS RECEIVED

THE ELEMENTS OF THE SCIENCE OF NUTRITION. Third revised edition, enlarged. By Graham Lusk, Ph. D., Sc. D., R. F. D. (Edin.), professor of Physiology at Cornell Medical School, New York. Third edition, reset. Octavo of 641 pages, illustrated. Philadelphia and London. W. B. Saunders Company, 1917. Cloth \$4.50 net. Philadelphia and London.

TEXT BOOK OF SURGICAL OPERATIONS. Illustrated by clinical observations, for Physicians and Students by Prof. Fedor Krause, Privy Medical Councilor, Directing Physician Augusta Hospital, Berlin, in association with Emil Heymann, M. D., chief physician, Augusta Hospital. Translated into English and edited for American readers by Albert Ehrenfried, A. B., M. D., F. A. C. S., first assistant visiting surgeon, Boston City Hospital; Junior Assistant Surgeon, Children's Hospital; Surgeon, Boston Consumptives' Hospital. In six volumes, Vol-

ume II with 373 illustrations in two or more colors. Rebman Company, Publishers, 141 West 36th Street, New York. Price \$7.00.

DISEASES OF THE GENITO-URINARY ORGANS AND THE KIDNEY. By Robert Holmes Greene, A. M., M. D., professor of Genito-urinary surgery, Medical Department of Fordham University; Genito-Urinary surgeon to the City and to the French Hospital, New York City; Fellow of the American Association of Genito-Urinary surgeons and Harlow Brooks, M. D., professor of clinical medicine, University and Bellevue Hospital Medical School; visiting physician to the City Hospital and to the Montefiore Home for Chronic Invalids, New York City; consulting Pathologist to the Muhlenberg Hospital, Plainfield, and to the Haekensack Hospital, N. J., consulting physician to the Beth Israel and to the Union Hospitals, New York; to the St. Mary's Hospital, Hoboken; to the Greenwich Hospital, and to the New London Memorial Hospital, Conn. Fourth edition, thoroughly revised. W. B. Saunders Company, Philadelphia and London. 1917.

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CLINICAL TUBERCULOSIS. By Francis Marion Pottenger, A. M., M. D., LL. D., Medical Director, Pottenger Sanatorium for diseases of the lungs and throat, Monrovia, California; Professor of diseases of the chest, college of physicians and surgeons, medical department, University of Southern California, Los Angeles, California, with a chapter on Laboratory Methods by Joseph Elbert Pottenger, A. B., M. D., Assistant Medical Director and Director of the Laboratory, Pottenger Sanatorium for diseases of the lungs and throat, Monrovia, California.

Volume I. Pathological anatomy, pathological physiology, diagnosis and prognosis, with one hundred and five text illustrations and charts, and six plates in colors. C. V. Mosby Company, Publishers, St. Louis. 1917.

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The Wisconsin Medical Journal

Volume XVI

MILWAUKEE, SEPTEMBER, 1917

Number 4

ORIGINAL ARTICLES

SOCIAL SERVICE, AN ALLY OF PREVENTIVE MEDICINE.*

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MILWAUKEE.

I am very glad of the opportunity to come before you this evening, and speak to you of one of the latest developments of medical science—Medical Social Service. I know that to many of you this may seem a strange way of putting it, as in the minds of most people, Medical Social Service seems to be social work, or “Charity Work” done for individuals who happen to be under a doctor’s care, rather than a form of medical treatment. Yet, in fact, the work which I am speaking of tonight, originated in the mind of a doctor, who felt the need of a kind of treatment for certain groups of patients, which until then had not been provided. The change in the attitude of the medical profession in recent years, the tendency to treat patients less and less by drugs, and more and more along lines which involve a change in environment, diet, hygiene, and habits of life is perhaps at bottom responsible for this new work. In other times, doctors were content to allow their hospital or dispensary patients to go home with a prescription, and to vary the prescription, if the patient did not seem to improve. Now, a doctor’s first thought in regard to a patient, whether in a hospital, in the office or in the dispensary, is what is this patient’s background? What kind, how much, and how tiring is his work? What are his interests, responsibilities and worries outside of his work? What is his attitude towards his family and theirs to him? And it is in accordance with the answers to these questions, that the form and

character of treatment is largely determined. You advise Mrs. Williams to go to a sanitarium while you urge Mrs. Edwards to stay at home, in the same medical situation, because of your knowledge of the difference in the two patients’ temperaments and home surroundings. You urge golf upon one man and a trip to California for another, not because of any difference in the intrinsic effectiveness of the two forms of treatments, but because each is best suited to the individual for whom it is prescribed.

In the same way, in regard to patients in dispensaries and free hospitals, the doctor began to question the efficacy of treatment given without relation to the home conditions and other environmental factors in the patient’s life. Dr. Richard C. Cabot of the Massachusetts General Hospital was the first to voice the increasing dissatisfaction of the doctors with the way free patients were treated in hospitals and dispensaries. Like many other doctors, before and since, he attempted, at first, to do his own social work, to find out from the patients, what were the difficulties in the home situation, and to advise them accordingly. He soon found that this was impracticable, both on account of the amount of time it consumed and also because frequently the patient himself had not enough insight to be able to give the significant facts, or enough intelligence to carry out the advice of the doctor, unaided. It was at this point that Dr. Cabot realized the need of putting this work into the hands of trained people, experts in social diagnosis, who could help him in making medical treatment effective. The rapid spread of medical social service bears witness to the eagerness with which doctors all over the country have seized this opportunity for increasing the effectiveness of their work for poor patients. It was only eleven years ago, that the first Social Worker took a position in a hospital. Yet, in that short space of time over a hundred medical Social Service Departments have developed in hospitals and dispensaries, all over the country. These departments vary in size from one worker to twenty-five or thirty.

*Read by invitation before the Medical Society of Milwaukee County.

The origin of Social Service, therefore, in the mind of a doctor, will do much to explain the present relationship of the social worker to the doctor in the hospitals or dispensaries where she is working. She is still as she was then, co-operating with him in carrying out the treatment which he wishes given the patient. And her success in her work is dependent entirely upon the extent to which the doctors make use of her services. The details of the work, in which the doctor and social worker may co-operate in securing the best treatment for the patient, are perhaps, best illustrated by definite cases. Take, for example, Mrs. Lee, a woman with an early carcinoma, who was seen at the dispensary, but absolutely refused operation. The doctor referred her to the Social Service Department for persuasion for the operation. After some conversation and a home visit the social worker found out that the doctor had suggested to her the name of a certain hospital where her brother had recently died. The idea of going to this hospital, where her associations were so recent and unpleasant, had terrified her to such an extent that she had not been willing to consider the idea of operation at all. When it was explained to her that she could go to another hospital, she became much more willing to listen to reason. Then, however, the problem of making plans for her family arose. She had four small children and no relatives with whom she could leave them, as her old mother was too frail to look after them. By getting the help of a society which was interested in placing children, the social worker was able to make arrangements for them, while the old mother remained at home and did the cooking for the father of the family, thus relieving the mind of the patient, as to how he would fare, while she was in the hospital. Within a week, Mrs. Lee had had her operation, and at the end of three weeks was returned to her home under the care of the Visiting Nursing Association, while the children were kept away for another month until the mother was strong enough to make it advisable for them to return to their home. Another interesting case, was that of Matt Kelly, who had been a "repeater" at a large hospital for several years with a severe cardiac lesion. He would leave the hospital after a four or five weeks' stay in apparently good condition, only to return at the end of a period varying from six weeks to three months, with marked decompensation and every symptom of overstrain. He had been repeatedly instructed not to do heavy work,

but his anxiety not to be a charge upon his family was so great that every time he left the hospital he looked for work and tried it until he could work no longer. The social worker took up this problem and succeeded in finding Matt a job as night watchman where the work was not too much for his strength and where he remained for several years without a single break in compensation. Incidentally, it is not always with employment that the social worker's assistance is helpful in a cardiac case. A young boy had been carefully placed in an office where there was no chance of overstraining his heart, and whose home conditions were found to be exceptionally good, kept showing signs of decompensation at frequent intervals, completely puzzling the doctors and the social worker as well, until upon close questioning, it was found that he was in the habit of attending a gymnasium where he was an expert in putting the shot. A girl in a similar situation, was finally told that she would have to stop work, but just as she was about to do so, the social worker found that she allowed so little time to get to work, that she was always in a state of excitement for fear that she might be late and usually ran up the stairs to punch the time clock.

These cases illustrate the possibility of increasing the effectiveness of treatment. There is also a wide field for the social worker in relation to diagnosis. In cases, for instance, of mental and nervous disorders, where the diagnosis depends largely on whether or not the patient's reaction to circumstances is normal, procedure is frequently difficult without the investigation carried out by the social worker. A man complains that his associates dislike him and gives the history of changing his jobs frequently on account of trouble with his superiors. The doctor may suspect delusions of persecution, but unless he can get at the actual facts, diagnosis is uncertain. Again, in questioning the source of an infection, such investigation proves its usefulness. A man came in to the Out-Patient Department of a large hospital, suffering from what apparently was lead poisoning. He said, however, that he had been a cobbler all his life, and nothing in his habits or surroundings indicated a possible source of infection, until it was found that he was in the habit of holding the small lead pegs, which he used in repairing, in his mouth.

These cases, while by no means covering the whole field, serve to give a general idea of the

ways in which the social worker may assist the doctor. In relation to the administrative authorities of the hospital or dispensary, the social worker can also be helpful, especially in institutions which are small or are not yet fully developed. The administrative function of determining the suitability of patients for admission is frequently, in small hospitals, left to the social worker. This is quite right, unless the institution can afford a special person with both medical and social outlook to be responsible for this question. It is absolutely necessary that in admitting persons not only their financial situation, but their medical needs, the cost of securing adequate treatment at private rates, and the general social situation of the family, all be considered, and these are things which neither the doctor occupied with the medical details, nor the superintendent, busy with administrative routine, has time to take up. They should, however, at the earliest opportunity, be put in the hands of a registrar, so that the social worker may not be handicapped in her work, by being connected in the patient's mind with the process of eliminating the fit from the unfit, and of detecting the possible impostor, who, by the way, is not nearly as frequent as articles on Dispensary Abuse would sometimes make us believe.

It may at this point be interesting to say a word in regard to the relation of the social worker in the hospital to the social workers outside the hospital, in all the various agencies which are attempting to work with the poor. The first idea of modern social work is that it shall be constructive, that is, that it shall make the person helped less likely to need future help. For this reason, the Associated Charities Worker, in order really to help a family wishes to know among other things, just what the health of the family is. For this reason, she refers anyone whose health seems to be below par, to the dispensary. Here it is the business of the medical social worker to interpret to her the medical situation, in such a way, that the best work for the patient is possible. The same is true of the other agencies with which the social worker has to deal. The Rescue Mission, the Employment Bureau, the Church Society, and all the rest. Her aim is never to duplicate the work that they do, but to make use of them for the patients under her care in every possible way. If a family seems to be suffering because the income is not sufficient to buy proper food, she refers them to the Associated Charities whose special province it is to take

charge of just such cases, thus leaving her own time more free for the work which cannot be handled by any other society. Sometimes this co-operation between agencies means long and careful planning on the part of both workers. I have in mind a family which is at present being handled by two of the Milwaukee Agencies, which illustrates this. The mother has been under observation for some time on account of a possible tuberculous infection, and her youngest child, a little girl of three, has at the same time been under observation on account of peculiar attacks, which have finally been diagnosed as due to a cyst of the brain. During this period, the Associated Charities have co-operated with the doctor in improving home conditions by sending in extra food and relieving the mother of the worry and hard work which were at first thought to be responsible for her run down condition. Now, unfortunately, the diagnosis of tuberculosis has been made and the two agencies are facing the problem of keeping the home together while the mother goes to a sanatorium for treatment, and the child to a hospital for removal of the cyst. It will mean close, careful work for both agencies to prevent the family from losing touch with one another and to keep a sense of responsibility alive in the father during the time he is separated from his wife and child. If the medical social worker tried to do the work alone, it would probably mean that in the pressure of other duties more nearly connected with the dispensary this problem would not receive sufficient attention. For the same reason the social worker in the hospital or dispensary does not give food, clothes, or money or any help of that sort. To do this without doing more harm than good, requires more time and effort than she could spend without loss to her own work and is best left in the hands of the people who are specially trained for it.

Finally, I want to speak of the social worker in her relation to the patient. Just as she represents and interprets the medical side of the institution to the patient and to outside workers, so in turn, she represents the patient and his problems to the doctor. Doctors, as Dr. Cabot so aptly puts it, tend to see patients either as all foreground or as all background. That is, they see either the outstanding facts of the diagnosis without due relation of the fact to the background of the patient's life, or, they see only the general idea, which is their conception of a hospital patient, and forget the points of individuality and difference, which

need to be considered in dealing with the personality before them. The patient's disease may well be a mere incidental factor in a complicated social situation, which must be understood before he can receive effective treatment. Often he is too inexpressive to put this situation into language that the doctor can understand. Often again, he is not himself conscious of the existence of the situation. He may only realize it as something which makes it impossible for him to carry out the doctor's wishes. The social worker by her touch with the home is able to grasp this situation and to present it to the doctor, in such a way that the treatment when carried out may be in relation to the patient's whole life and not to a detached part of it.

This may all seem rather far from the title of this paper,—Social Service as an ally of *preventive* medicine. It will, however, explain to every one that the kind of touch with families, which has been described, cannot fail, if it is rightly done, to teach the whole family more about health and hygiene, about good living conditions, and suitable employment. The mother, who receives instruction in feeding one baby will be more able to take care of the next one that comes. The child or young man who learns from the hospital to adapt himself, his habits, training and employment to his handicap, will never become the burden on the community, which it now bears by reason of the numbers of people who have been allowed to work at unsuitable occupations. Medical Social Service is working along preventive lines in the same way that all the best medical work has been along preventive lines, that is, by trying to eliminate itself.

DISCUSSION.

GERTRUDE M. KNOWLTON, SOCIAL WORKER AT MILWAUKEE CHILDREN'S HOSPITAL.

There is one result of Medical Social Service which Miss Murray has not mentioned tonight. While it is not the primary reason for the existence of Social Service, it is one that is worth while considering, in these days of the economical and efficient administration of institutions. This result is the actual saving in dollars and cents which it accomplishes for the hospital and thereby for the community. There are many patients kept in hospitals where their maintenance cost at least \$1.50 per day, who could be discharged only to the Out-Patient Department if there were some means of controlling home treatment and the regularity of reporting back to the doctor. Also there are patients sent to the hospital who could well be taken care of in the Out-Patient depart-

ment from the start, if close watching at home and a few changes in the conditions there, could be brought about. The Social Worker can in the majority of cases, accomplish the necessary supervision and readjustments, thereby saving the hospital the cost of the patient's maintenance.

There is another kind of saving too, which Social Service brings about. Those who are familiar with Out-Patient work, know the large number of patients who come once for examination and diagnosis but do not return or come back once or twice only, discontinuing treatment long before they are helped. The valuable time spent by the physician in examination, laboratory tests, etc., is entirely wasted. It is not difficult to measure what Social Service can do to prevent this waste by finding out the reason for the patient's lapses (for there always is some reason, good or otherwise, in the patient's mind), removing it if possible and in most instances getting him back regularly until treatment is finished.

Several clinics have measured the increased efficiency of this method. A survey of a large eye clinic showed that the year before its social work began, only 50% of the patients who had had refraction and glasses prescribed ever got the glasses. The following year with a social worker in the clinic 97% got their glasses.

In a gynaecological clinic, without Social Service, only 7% of the patients for whom operation was advised, secured it. The following year, with Social Service, 95% secured operation.

The social worker in a syphilis clinic where 1,118 new patients were treated last year, reports only 107 lost patients, i. e., not under treatment, at the end of the year.

Medical Social Service brings about the minimum of wasted time on the part of the physician and the maximum result for the patient.

If you shall inclose, within a piece of thin silk, Galbanum made soft, and shall lay it to the mouth of the matrix all night, the head of that woman having no foul or stinking clothes upon it, but only covered with a caul, and a clean or thin handkerchief, without any kind of odours, in the morning when the same are loosed from the head, if the crown of her head smell of Galbanum, it is a sure token that the woman is apt to have children. (Hippocrates.)

The root of a gourd tied to the reins of the back of woman that are in labour or travail of child, doth cause speedy deliverance thereof; but let it be taken away as soon as the child doth come forth, lest the matrix go out after the child. (Trotula. De Passionibus Mulierum.)

In the first beginning of any sickness, or at any time of any question for the sick, if the moon be oriental, nigh to the sun, within twelve degrees, it is a sign of death, and the nearer to the sun, and in combustion, the worse. (Johannes Ganivetus.)

TESTS FOR ESTIMATING THE FUNCTIONAL EFFICIENCY OF KIDNEYS.

BY JOHN F. SCHNEIDER, A. B., M. D.,

OSHKOSH, WIS.

Examination of the urine for diagnostic and prognostic purposes is no new procedure. Hippocrates (about 400 B. C.) advised his colleagues to examine the urine of their patients and pointed out that certain changes occur in the urine concomitant with disease. From that time until the present, various aspects of urine analysis have been described by medical men, and new methods developed from time to time as medical knowledge accumulated.

The first work of any scientific importance, was written in the seventh century. This writer not only described what the normal urine should be, but also, in a clear way, indicated changes that occur in the urine of disease. Another extensive treatise appeared in the twelfth century, and it remained authoritative for five hundred years. At one time, between the twelfth and sixteenth centuries, all physicians were practically urologists, because they depended largely upon the urine for diagnosis and prognosis. For this age, the urinal became the insignia of the physician, and the emblem of medicine. Examination of the urine became such a fad that it was resorted to not only by the regular practitioner and the University graduate, but also by the school of quacks, who called themselves uromancers, or uroscopists. These fakery had their patients (or should I say victims?) pass urine into a glass flask, and then, after gravely inspecting it, guessed the illness and temperament of the patient and dispensed miraculous cures.

In the latter part of the sixteenth century, a work was written describing the so-called analytic method of diagnosing disease, which depended on the proportion in which the three elements of man's nature—Mercury, Sulphur, and Salt—occurred in the urine. In the seventeenth century some real experimental work was done with urine. The urine was distilled and the vapors weighed. When the vapor occupied a certain part of the still, it was said to indicate disease in a certain part of the body. This work was not done in vain, however, because it led to the discovery of the specific gravity of the urine. The next step being the

study of the average urine of the healthy individual, the amount passed and the specific gravity were used as a standard with which the unhealthy urine could be compared. Up to this time, only the most obvious changes which occur in urine were recognized. Deviations from the normal in tint, specific gravity, and volume were the principal symptoms noted.

In the latter part of the eighteenth century there was a decided advance in urinary analysis. It was discovered that by boiling the urine of diseased kidneys coagulated albumin would appear. Urea, uric acid, and some of the salts of the urine were also discovered about this time.

The medical profession however, was not sufficiently receptive to scientific advances when the presence of albumin indicating kidney disease was first pointed out, and it took the work of Richard Bright in 1827 to emphasize that pathological conditions of the kidneys are accompanied by albuminuria. Ten years after Bright's publication, the presence of urinary casts was added to the list of urinary findings in nephritis.

From these early studies, the present methods of urine analysis have gradually grown and we physicians of this age should ever feel thankful for our laboratory methods, when we are reminded of the time, when a physician, examining the urine of a diabetic patient depended for his diagnosis on the "sweet odor" but was not considered absolutely scientific unless he verified his findings by subjecting the specimen also to his sense of taste.

One of the most modern urological procedures is the catheterization of the ureters. This work was first done on women and one ureter only could be entered at a time because of the crude instruments used. The up-to-date catheterizing cystoscopes, through which both ureters can be catheterized at the same time, make it possible to tell whether one or both of the kidneys are diseased.

In recent years, the determination of the functional efficiency, or the capacity for work of both kidneys, and especially of each kidney separately by various methods has been considered one of the important diagnostic and prognostic criteria by surgeons and urologists in the study of renal diseases.

Laboratory men in various parts of the world have been trying to find a test, which (what ever may be the cause of the impaired renal function), will show how efficiently the kidneys are excreting certain end-products of metabolism. Which pro-

ducts, if retained usher in the fatal ending in a large proportion of cases of renal disease.

The first of these methods used to test the functional capacity of the kidney was cryoscopy, which consists of freezing the urine. This was introduced in 1897 by Koranyi of Budapest, but has been little used in this country. Cryoscopy depends on the principle which has been proved experimentally, that the freezing point of a solution is lowered in proportion to the number of molecules dissolved in a given volume of the solution, no matter what the weight of the individual molecules may be. The freezing point of normal urine has been found to vary between -1.3° and -2.2° C. When the kidneys are diseased, fewer molecules of solids are excreted and the freezing point is higher—i. e., nearer to 0° C. A freezing point in urine higher than -1° C. is usually regarded as abnormal. This principle can be applied to any solution, the blood as well as the urine, and when impaired kidney function is revealed by diminished molecular concentration of the urine, a corresponding increased molecular concentration of the blood should be found to exist at the same time.

When the kidneys are almost destroyed by disease, as, for example, shortly before death from uremia, the freezing point of the urine is often very nearly at 0° C. which is the freezing point of distilled water. Now by applying the test also to the blood from the same patient, the two tests can be used as a check upon each other. It has been found that normal blood freezes at about $-.56^{\circ}$ C. a figure which is remarkably constant. When the kidneys are diseased and do not excrete as much effete material as normally, an increased amount of toxic substance accumulates in the blood and the freezing point of the blood becomes lowered. Abnormal kidneys therefore, can be shown to exist when the freezing point of the urine is high and the freezing point of the blood lower than normal. The practical application of this test exists when one kidney is so diseased that it is deemed advisable to remove it. (1) When the freezing point of the blood is normal and when the freezing point of the urine of one kidney is normal, then the other affected kidney can safely be extirpated.

(2) When the freezing point of the blood is normal and that of the urine of the opposite kidney does not fall within normal limits, a conservative

operation, such as nephrotomy instead of nephrectomy, should be performed.

(3) When the freezing point of both blood and urine of the opposite kidney are abnormal, operation on the affected kidney should be performed only under stress of dire necessity.

The second of these tests for determining the efficiency of kidney function was most popular in France. It consists of injecting a 5% watery solution of methylene-blue intramuscularly and making deductions from the rapidity with which the coloring matter appears in the urine. Under normal conditions the blue color should appear in the urine in half an hour after injecting it. If the appearance is delayed to an hour and a half, or longer, the kidneys are said to have a diminished permeability. This test has proven unreliable. It has been proven that, so long as a small amount of parenchyma remains healthy, as is often the case in an extensively diseased organ, methylene-blue will appear in the urine promptly after injection. Again, some kidneys seem to have a certain selective action upon methylene-blue even when diseased, and they excrete the dye readily, even though they may not be capable of excreting the urinary constituents. And on the other hand, cases have been found where at times the kidneys act normally so far as excreting urine is concerned, but cannot excrete methylene-blue promptly. The length of time taken to entirely excrete a given dose of methylene-blue is also an objection to its use. The test is now used only for determining which of the kidneys is most affected by comparing the urines from the two kidneys and is regarded as not a trustworthy guide in determining the functional value of kidneys.

The third test, advocated by Casper and Richter in 1900 was the favorite method of the German School. This test is based upon the fact that when phloridzin is injected into the circulation, sugar is excreted by the kidneys and appears in the urine. One c.c. of a 1 to 200 solution, or 5 milligrams of the drug, is injected subcutaneously. The patient is allowed to urinate just before the injection and this urine should be tested to make sure that it contains no sugar. The urine is then collected each quarter of an hour and each sample is tested for sugar. In a normal individual, sugar appears within half an hour to an hour, disappears within 3 to 4 hours and the total amount excreted is from one to two grams. In chronic nephritis, with interstitial changes, the excretion is

either diminished or abolished even when no albuminuria is present. This test requires great care and the urine must be frequently tested for sugar. It has also been stated that the amount of sugar excreted when this test is applied, is no indication as to the amount of healthy parenchyma in the kidneys. The test, however, is reliable when there is a difference in the amount of sugar excreted by either kidney, and can be used to determine which of the two works better.

The indigo-carmin test of Voleker and Joseph is similar in every way to the methylene-blue test. Other substances used for tests of this kind are salt, KI, and lactose. All have been found inefficient for general application.

The fourth test which I wish to describe is by far the best that has been so far devised. It should appeal to us especially because it is the result of work by American Physicians done at the Johns Hopkins Medical School.

The substance used for this test is called Phenol-Sulphone-Phthalein. In dilute alkaline solution this substance gives a somewhat purer red than the well known phenolphthalein. It is positively not toxic and non-irritating, and it is especially well adapted for use as a functional renal test because of its early appearance in the urine after injection and its rapid and complete elimination by the kidneys.

The technique of the phthalein test, as it is now called, is as follows:

The patient should drink two glasses of water about one-half hour before taking the test solution. Then the bladder should be emptied and 6 mg. of the phthalein in solution injected into the lumbar muscles. In one hour and ten minutes (allowing ten minutes for the drug to absorb) the patient should empty the bladder into a clean vessel, and in an hour this is done again. If necessary, a catheter may be passed at the beginning of the test and allowed to remain while the urine drains off during the prescribed time. When the specimens are ready for examination they should be rendered alkaline with sodium hydroxide and enough water added to bring the total quantity up to one liter. Adding the sodium hydroxide brings out the pink color of the phthalein, the intensity of the color depending on the quantity of the phthalein present in the specimen. A quantity of this solution can now be compared directly to a standard scale of phthalein dilutions. A series of test tubes can be used for this purpose each of

which contains a solution of phthalein of known strength.

The standard dilutions are prepared by placing 6 mg. of phthalein (the same quantity that is injected) into 1 liter of water, and calling that the 100% solution. Dilutions made from this ranging from 90% down to 10% are placed in separate labeled test tubes. If tightly corked and kept away from the light, they can be used as a scale for a long time.

Thus we have two solutions of phthalein; the one a prepared standard of known strength, diluted in a series ranging from 10% to 90%. The other contains phthalein which has passed through the body, the strength of which can be estimated by direct comparison with the standard scale much in the same way as we read the percentage of hemoglobin on a Talquist hemoglobin scale when blood is being examined.

In a paper published in the Jour. American Medical Assoc., Sept. 2nd, 1911, Drs. Rountree and Geraghty, to whom is due the credit for first using phenol-sulphone-phthalein as a renal test, give the following conclusions from the practical application of this test.

1. "Phenolsulphonephthalein has many advantages over all other functional tests thus far proposed."

2. "Phenolsulphonephthalein is better adapted for use as a functional test than any other drug previously employed for the same purposes on account of its early appearance in the urine and the rapidity and completeness of its elimination by the kidney and the reliance to be placed on its findings."

3. "The method of quantitative estimation of the amount of the drug excreted is simple and exceedingly accurate."

4. "It is of immense value from a diagnostic and prognostic standpoint in nephritis, in as much as it reveals the degree of functional derangement in nephritis whether of the acute or chronic variety."

5. "In cardiorenal cases the test may prove of value in determining to what degree renal insufficiency is responsible for the clinical picture presented."

6. "The test has proved of value not only in diagnosing uremia from conditions simulating it,

but has also successfully indicated that uremia was impending when no clinical evidence of its existence at the time was present."

7. "The test has proved of great value in revealing the true renal condition in cases of urinary obstruction. It is here of more value than the urinary output of total solids, urea, or total nitrogen, and enables the surgeon to select a time for operation when the kidneys are in their most favorable functional condition. The improvement in the renal condition in cases of urinary obstruction, following the institution of preliminary drainage, is strikingly indicated by this test."

8. "In unilateral and bilateral kidney disease the absolute amount of work done by each kidney, as well as the relative proportion can be determined when the urines are obtained separately. We do not feel that this is always mathematically accurate, but in our series it has indicated the functional capacity to a degree not attained by any other test."

The work done with the phthalein test during past years since the publication of the above, justifies the claim that this test gives the most reliable information regarding the efficiency of kidney function and makes it unnecessary at this time to modify any of the original statements of its authors.

OUTLINES FOR COUNTY MEDICAL MEETINGS.

BY EDWARD EVANS, M. D.,

LA CROSSE, WIS.

In presenting this brief outline for the County Medical Societies holding (a) four meetings; (b) six meetings; and (c) twelve meetings yearly, I beg you to remember that I am merely making suggestions, not trying to outline a hard and fast course to be pursued.

At the outset I would like to say that we should always keep in view the fact that we belong to a profession rather than a business organization. The doctor is not a business man primarily but a professional man. While the man in business both by preparatory training and present activity puts all his energies into making his calling successful from purely personal if not selfish motives, the doctor primarily by training and the pursuit of his

calling is bending all his energies for the welfare of others and secondarily only is he aiming to make his profession an economic and business success. In other words, altruism must be the motive force inspiring his efforts. And, by the way, it is very interesting to notice that with very few exceptions, those in our profession who are endeavoring primarily to be successful money makers rarely succeed either as business or professional men, while those who throw themselves heart and soul into their professional work, if only endowed with a fair amount of gray matter always succeed professionally and rarely fail even from a business view point.

Hence our meetings must be only secondarily of a business nature. There should however, be at least one so-called business meeting a year. Inasmuch as the election of officers takes place according to our constitution at the December meeting, we should make this the business meeting. Several purposes should be kept in mind. First, to elect officers. Second, to plan for the year's work. Third, to get acquainted with each other and we all know how very necessary this getting really acquainted with each other is and how seldom we do it. Fourth, to talk over professional matters in the County from a business and professional standpoint. Fifth, and incidentally connected with the last two points, settle disputes and misunderstandings. Inasmuch as the Ancient Philosopher has said that, "the stomach is President of Pleasure and Disgust," this meeting should be in the nature of a banquet or smoker. You remember when Dr. McCormick went up and down the States organizing the Medical Profession he said, "The best way to keep us good natured and friendly with each other is to feed the brutes."

From the very nature of our calling we are in a measure trained servants of and holding a license from the State, and therefore in some degree responsible to the State for public service. As such, we have a duty outside of professional rounds with a fee attachment. Our highest duty, as well as our greatest privilege is to instruct and educate the public in health matters—to prevent disease. Therefore, we should hold a public meeting once a year—A Public Health and Education Meeting. Gather together the parents, teachers, and preachers; especially enlisting the aid of the Ladies' Club (or clubs, if there be more than one) in your county. Make the meeting *worth while*, using home or outside talent or both. At this

meeting have a small public health exhibit if possible. This is easily procured in our State through the Anti-tuberculosis Association or the University Extension. Above everything else have a program that will get the laity interested and *talking*, not only *at* the meeting but *after* the meeting and *about* the meeting. Plans and methods in plenty will suggest themselves to any live secretary.

To be efficient, we must be trained. I mean not only as individuals but as a body. Therefore, we must have meetings for professional study and advancement. If the society has the local ability, supply your own essayists and clinicians. Self culture, individual *work* is the most valuable. I have seen meetings pronounced a great success because some popular lecturer or good clinician gave a splendid talk or demonstration, yet they appealed to me as dismal failures because they did not stimulate the listeners to "Go Thou and Do Likewise". Use home talent. That means that in some degree at least every member of your county society must assist. The drone and fine knocker, the man who says, "what's the use," or "it can't be done", is more than a drag on the society, he is a real danger to its efficiency. If there is a hospital within the boundaries of your County, hold at least one of your meetings there. Make this a diagnostic meeting. Call for laboratory methods as aids. If the hospital has not those aids, make them so ashamed of the omission that soon a good laboratory will be provided. This will be a great aid even to those not connected with the hospital. The first thing you know, you will have a real County Laboratory. This provides for a third meeting.

The Fourth Meeting.

What shall the fourth meeting be when quarterly meetings only are held?

Turn the fourth meeting over to a committee on literature or a journal committee. First, be sure however, that you have the right sort of a committee to make this meeting a success. If your society be a small one with an attendance of say eight or twelve, make every member work for this meeting. Have abstracts of late important papers or newer advances in medical science, say the newer points in urinalysis or the differential diagnosis between heart and kidney cases, if you will. Have short discussions on live matters of the hour, poliomyelitis perhaps. A lay writer in a recent number of the Saturday Evening Post puts us all to shame in his knowledge of the sub-

ject. Try not to forget the public is pushing the drone amongst us in many of the problems relating to public medicine. Have short criticisms of medical books—say a comparison of such books as those of Osler and of Cabot—the synthetic as opposed to the analytic.

Let the meeting be snappy and stimulating and it cannot fail to be of educational value. "Reading and much reading," says Burke, "is good, but the power of digesting what you read is better." Digestion has gone wrong with so many of us. The worst of us have mental pellagra. We all need Vitamines.

Having thus sketched in hasty outline a plan for societies holding quarterly meetings, it is not necessary to go into details for meetings where two additional or eight additional meetings are held. The principles underlying the work are the same. We need the business meeting for the proper conduct of affairs. Because of the nature of our professional work, we should hold at least one public meeting a year, and because of the necessity of self-culture we must hold meetings devoted strictly to our professional work. But those principles underlying the year's work as sketched for four meetings hold good for societies holding six and twelve meetings. For societies holding six meetings a year, I would advise that one meeting held in the summer time be a sociability meeting, either a launch or automobile ride or a picnic, but an all day outing in any case including the wives and children and sweethearts of the doctors in the county. The sixth meeting might be made a community get-together meeting in the shape of a banquet with an after dinner address or a smoker with impromptu talks (well organized and provided for before-hand however). To this meeting it is well to invite those in the community who are especially interested in public health questions and social problems. It might be made a meeting for educational work on the cancer problem.

Where societies hold twelve meetings a year, provision should be made for more serious scientific work. Here if possible, that is if the society can avail itself of hospital facilities, at least two and better four clinical meetings should be held in the hospital where cases can be presented for diagnosis and for discussion of proper therapeutic methods. Where hospitals are not available, a good plan, as suggested by our live Secretary Dr. Sleyster, is to subscribe for the Massachusetts Clinical Pathological Reports and make them the

basis of discussion and study. Another good plan is, I think, to bring graduate work to the members. This can be done by securing a clinical teacher or laboratory worker to give a course of lectures in some subject in which he is specializing. With the University Medical School and Marquette University in our State, it is possible, I think, for a large number of societies to avail themselves of this privilege each year at very little expense. And speaking of expense, County Societies and the individual members should wake up to the fact that for a profession that represents so much to them, they should be willing to spend more money for self-improvement in it. La Crosse County Medical Society had a course of lectures on the physiology and pathology of the blood given two years ago by Prof. Bunting of the University, that was certainly worth very much more to us than it cost. For societies holding monthly meetings, I think a good plan is to alter the program more or less from year to year. In all cases, only those County Societies that have a live program committee which prepares the program of the right sort at the *beginning* of the year for the *whole* year, are going to have successful meetings.

Not having been a County Secretary for 10! those many years, I feel that I am carrying coals to Newcastle, in thus taking up the time of energetic successful County Secretaries, as you demonstrate you are by coming here a day before the general meeting. I will therefore only repeat the saying of Horace Greeley that in holding successful county meetings as in everything else "the way to proceed is to proceed."

This and the following three papers were read before the Assoc. of County Secretaries' Meeting, Madison, Oct. 3, 1916.

THE COUNTY SOCIETY AND THE LABORATORY.

BY J. M. DODD, M. D.,

ASHLAND.

The laboratory in the average physician's office only demonstrates that he knows something about laboratory tests and desires to use them. He does so when time and occasion permit but a casual observation of the equipment, however, will show that it is used only in a limited way and with necessarily very meagre and unsatisfactory results.

The busy practitioner has the greatest need of the laboratory and the least time to use it.

Once in a while we may find a systematic doctor who will take time to do good laboratory work but such practitioners are rare. It can be done, but, having personally attacked this problem from almost every angle the conclusion has been forced upon me that the best way to get satisfactory results from the laboratory is to have a technician—preferably a graduate in medicine—give his time to the work.

Time and experience is rapidly demonstrating that the ideal way to practise medicine is by the formation of a group of specialists who so correlate their work as to render the best that medical science affords.

We are constantly impressed with the futility of the efforts of a doctor to cover the entire field of medicine and do good work in each of its divisions. We are ever taught that he does the best work who, after a general preparation in the field, concentrates his energies on a single line or restricted group of subjects and therefore I do not believe that specialization can be carried too far where the field is large enough to afford a sufficient volume of work.

I have referred to the ideal condition for the practice of medicine but it is not practical in its entirety.

In smaller communities the very nature of conditions compels the doctor to treat all afflicted that come to him and I see evidences every day that some show remarkable diagnostic acumen and a high degree of therapeutic judgment. It is noticeable that these men who are doing the best work are the most eager to avail themselves of every means that will help them secure the best results. To such men the method that is here proposed will be welcome if it is only practicable.

In Wisconsin until recently the assistance of the laboratory was only obtainable, outside the large medical centers, through the State Hygienic laboratory at Madison and the time required to prepare specimens, get them to the laboratory, and receive a report was too long to make them of sufficient value to be of much aid to the practitioners in remote sections of the state. For instance in our own city, it formerly required a week to get containers from Madison, collect, pack and ship samples of water and get a report from the state laboratory. The entire community might be-

come infected with typhoid while trying to determine whether or not the water was polluted.

Compare that state of affairs with the present method of treatment of the water and method of keeping check on it by a daily analysis in a local laboratory. By this method the condition of the water is known in a comparatively few hours and is dealt with accordingly. As a result we have not had a case of gastro-intestinal infection attributable to the water since this system was put into service. Think of waiting two or three days for a report on a case of sore throat before knowing whether or not to give antitoxin.

How satisfactory it is to have a laboratory diagnosis of diphtheria, a Widal, or a Wassermann made at once without the necessity of sending the specimen to a distant city and wait days for a reply.

The State Board of Health, in order to bring its service nearer to the physicians and people, have established two branch laboratories as adjuncts to the central laboratory at Madison and this is a commendable step. It is nevertheless obvious that it is not possible for the State to establish branch laboratories in every community, therefore the necessity of provision by medical groups, such as the County Medical Society, for such service as will not admit of the delay incident to sending specimens long distances.

Is it practicable to have these tests made by one of your number in a small community group? I believe that it is and suggest that someone in each community be selected to do this particular line of work and that you all send your specimens to him and see that he is paid for his service. If there is not enough work to warrant reasonable returns for his work permit him to specialize in some line and send him as much work as possible in that line. Educate the public to value the laboratory findings and above all do not neglect to attach sufficient importance to them yourselves.

By better and more systematic work you will be better pleased with your work and its results and the public will accord you a higher place in their respect and confidence.

Who can say that the present tendency of so many people toward the various cults that believe their branch is the whole tree, is not due, partly to poor work and the showing we make while doing it.

The suggestion of making laboratory instruction a feature in County Medical Society work is an

innovation and I am asked to outline a plan by which such instruction and demonstrations, as are practicable, may be given. In outlining a plan for such demonstrations several factors must be considered, namely:

1. The purpose of such demonstrations.
2. The method of presenting laboratory methods.
3. The demonstrator.
4. The facilities for such demonstrations afforded by the place of meeting.
5. The scope of the demonstrations.
6. The value of such demonstrations.

What is the purpose of such demonstrations? Do we aim to teach laboratory methods to the general practitioner? Does he desire and employ such technical knowledge? A reply in the negative is, in my mind, proper for both. Should the general practitioner know what specimens to submit, what data to send with the specimens, what tests to ask for, how to submit specimens, and know the theory and significance of the findings as reported? Emphatically *yes*. The aim of such demonstrations should, therefore, be to teach the physician how to do correctly a few of the routine tests which his time and equipment may allow him to perform; to know how to submit specimens which will throw some light upon his question; to know what data to send with the specimens so as to allow the pathologist to make a purposeful examination and render an intelligent laboratory diagnosis; how to judge the value of certain tests and reports and how to use such reports in his diagnosis, treatment and prognosis.

Knowing now what we wish to teach, how shall we teach it? Should demonstrations be made in a systematic manner considering all the important tests of urinalysis, etc., or should cases be presented and such tests be demonstrated as have a bearing upon the case? The latter method I believe the preferable, for by demonstrating the tests with the case the former will be more interesting, will have more significance, and the more frequently applied and useful methods will be given the most prominence and by constant repetition will become better understood and therefore more intelligently employed.

To which of the members shall be assigned this part of the program? We have a choice of three: namely a pathologist, the member presenting the case, and third a member no pathologist and not presenting the case. In those societies which have

as a member a pathologist or those who adopt the suggestion previously made—that of having one man do the laboratory work for the group—the choice is logically reduced to one—the pathologist. By assigning this part to the specialist in pathology we not only are more likely to receive a better demonstration but the relationship of pathologist and clinician will be more strongly brought out. Should the society have no pathologist on its roll our next choice is the physician demonstrating the case.

The facilities afforded by the meeting place will necessarily limit the demonstrations.

The demonstrations should fully show the ordinarily employed routine tests of urine and blood and the mistakes frequently made. The theory of the more advanced tests and their value and significance should be discussed. Emphasis is to be laid upon the proper method of collecting specimens and how to send them to the laboratory. What preservatives to employ for various specimens and for specimens for special tests should also be pointed out. An idea of the time required to perform various tests is not amiss. Paramount to all, how to differentiate between normal and abnormal findings and how to apply the laboratory to the clinical diagnosis should be considered.

Laboratory methods so demonstrated will, I believe, help to make the meeting more enjoyable, more profitable, will increase the faculty of observation, improve diagnoses and create a better feeling in the society.

Let us specify some errors frequently made by the general practitioner and the time required to perform some of the laboratory work:

Collecting a twenty-four hour specimen of urine without first having the patient empty his bladder and discarding this urine and again closing the collection by again having the patient empty his bladder and saving and including this urine.

Submitting a single micturition for analysis, especially a quantitative analysis.

Mistaking phosphates for albumin when employing the coagulation test for albuminuria.

Neglecting to determine whether a sugar test solution reduces itself.

Basing a diagnosis upon a single specimen, making such diagnoses as nephritis and diabetes when the condition is only transient.

Neglecting to give the quantity when requesting a quantitative analysis.

A simple qualitative urinalysis including only

specific gravity albumin and sugar requires from 2 to 5 minutes.

A complete quantitative urinalysis consumes the greater part of a day and necessitates the possession of a well fitted laboratory and a fair knowledge of chemistry.

Blood counts consisting of a total red and white count, a hemoglobin estimation and a differential count of 300 cells requires, including the time consumed for obtaining the dilutions and smears, from 1 to 3 hours dependent to a great extent upon the total leucocyte count which makes the differential more or less tedious. Because of the time and apparatus needed and the care the apparatus requires, blood examinations are, as a rule, impracticable for the busy doctor to do and should be referred to a pathologist.

A Widal test requires from 10 to 30 minutes from the time the hanging drop is in focus.

The Wassermann test requires 2 hours after the preparation and titration of the reagents has been completed.

Gastric analysis requires from 1 to 3 hours.

The diagnosis of smears consumes from 5 to 30 minutes after the smear is dry.

The Lange colloidal gold test requires 12 hours after the fluid has been obtained.

Bacteriological cultures require from 12 hours to one week from the time they are received at the laboratory for diagnosis.

The time, necessary concentration and freedom from interruption required by such work makes it well nigh impossible for the general practitioner to attempt, with success, since, if he has any practice he cannot give the necessary concentration much less the time free from interruption.

WOULD AN OLD AGE AND DISABILITY PENSION FOR AGED AND NEEDY PHYSICIANS BE POSSIBLE?

BY ROLLA W. CAIRNS, M. D.

RIVER FALLS.

The age of cold charity is passing. We are slowly getting rid of the beggar by teaching men how to help themselves. Life insurance, health and accident insurance and old age annuities are all steps in this process. The fraternal lodge, extending the helping hand to the sick and to the widows and orphans was the father of the assess-

ment insurance society. And it was the assessment insurance society which first brought both life and health insurance within reach of the masses of the people, and taught the value of insurance to those who most needed it. The failure of the earlier assessment insurance societies from inadequate rates has no place in this paper. These societies did a noble work if it was nothing more than to educate the people as to their needs of insurance.

The first thought in life insurance was merely the protection of the family of the insured in case of his untimely death and many a man has paid life insurance premiums for half a life time, only to find himself destitute in old age. Today the most popular life insurance policy is one which provides for the insured in case of total disability from any cause and pays him an annuity if he lives past seventy years of age. In this way thousands of men are providing for their old age.

In many of the European countries health insurance and old age insurance are compulsory with wage earners. In most cases part of the premium is deducted from the man's wages and the remainder of the premium is paid by the employer.

Thus the law is easily enforced with men working for an employer. In this country, for many years, some of the large employers of labor have provided health insurance for the employees by deducting a small amount from the workman's wages, and a few companies have paid annuities to employees who are disabled either by accident or as a result of age.

Most of the rail-road companies pay annuities to their retired men, the amount usually being one per cent. of the average wage for the ten years preceding retirement, multiplied by the number of years of service. This pension is paid by the employer, not from any contribution from the employee's wages. Many of these rail-road employees are members of voluntary associations to which they pay a percentage of their wages and from which they receive sick benefits and disability pensions in addition to those paid by the rail-road company.

The United States Brewers' Association has worked out a system of industrial insurance patterned in a large measure after the German system. The employee pays one-half per cent. of his wages, and the employer pays one and a half per cent. of the wages, and out of this fund sick

and accident benefits and old age pensions are paid.

Within the past ten years most of the states have passed laws compelling the employer to care for his employees in case of accident. The next step will be to compel insurance covering all sickness, and old age pensions.

Thus far I have been speaking chiefly of laborers, of those employed by others. The best example of old age pensions applied to the professional class of workers is teachers' pensions. Andrew Carnegie donated fifteen million dollars to establish the Carnegie Foundation, which pays retirement annuities to certain classes of college professors and instructors. In 1911 the Wisconsin legislature provided retirement annuities for public school teachers who have taught twenty-five years or more. The legislature provided an annual appropriation to the teachers' pension fund, and in addition to this, every teacher must contribute one per cent. of his wages for the first ten years of service and two per cent. for the next fifteen years of service. This contribution is compulsory, being deducted from the teacher's wages before he is paid. The annuities paid are proportional to the years of service, and in no wise proportional to the wages earned or to the amount contributed to the fund by the teacher.

I have mentioned four sources of funds for the payment of old age annuities: Government appropriation, private endowment, contributions by employer, and contributions by the employee, that is by the person who may some time be an applicant for an annuity. These four sources, or combinations of them, form the basis of all pension systems of which I know.

The physicians can not hope to have a state appropriation to help support a pension fund as have the public school teachers; they can scarcely hope for a Carnegie to endow a pension fund as has been done for the college professors; they have no employer to pay them pensions as have the railroad men; thus the only source of pensions for physicians is contributions by the physicians themselves.

In establishing a pension system the first problem is to induce enough physicians to contribute. With the public school teacher and the brewery worker the contribution is compulsory, the contribution is deducted from the wages before they are paid. They must accept the system or leave the line of work. There is no such hold on the phy-

sician. Some one says make it obligatory to every member of the State Society. Those who have served as County Secretaries know the opposition to the Medical Defense Fund and the opposition to this would be greater because the amount to be collected would be larger. While participation in the pension fund should be limited to members of the State Society, members of the society should be at liberty to participate in the fund or not as they choose. Participation in the fund must be voluntary. This brings the fund in competition with life insurance and with health insurance companies. We would have to prove to the physicians of the state that, as a society we could handle this branch of insurance equitably, and as economically as can the regular insurance companies. Altho much depends on the efficiency of our society officers, personally I believe that this can be done. The select class of risks and the facilities of the county societies for making collections and adjusting claims give us some advantage over the regular insurance companies.

Secondly there is the question of how much each physician should contribute: The teacher and the brewery worker each pays a percentage of his wages, and in either case the amount of wages is easily known. Not a physician in general practice knows what his income will be for 1916. We know what we reported to the Income Tax Assessor for 1915 but some would not like to have that published in the medical society meeting. A per capita assessment might be more satisfactory than any attempt to rate assessments according to each man's income.

Thirdly is the question of conditions of retirement. With the teacher it is solely years of service, with the brewery worker it is age and physical infirmity, and in either case the man either works full time or retires. The physician who is old and quite infirm may continue to attend a limited number of friends and old time patients, and thus the line between the retired and the active is not easily drawn. Age and physical condition should be the determining factors, and the recipient of a pension should be permitted to add to his income by practice if he is able to do so.

Fourthly is the question of the amount of the pension. With the teacher it is determined solely by the years of service; with the brewery worker it is proportional to wages at time of retirement; with the railroad employee it is a combination of these two factors. With the physician the deter-

mining factors should be age and physical condition, as these are the factors which determine his ability to earn a livelihood by his profession.

The County Society, with the advice of its Board of Censors, would be in a position to judge the worthiness of claims against the fund and to protect the society from imposition. Every physician who has been called upon to fill out statements for claims against health and accident insurance companies knows that these statements are habitually overdrawn, and that many semi-fraudulent claims are paid because the company finds it cheaper to pay than to investigate them. But the officers of a county society are in a position to know the worthiness of a claim presented by any member of that society.

To sum up: I believe that it is practical for the State Society to establish a fund for old age and disability pensions, members of the society voluntarily to choose whether they are to participate in the fund or not. Those who participate in the fund to pay regular assessments thru the secretaries of the county societies to the state society, the money to be kept in a separate fund by the Treasurer of the State Society and properly invested. From this fund disability annuities to be paid on the recommendation of the county society of which the applicant is a member and the approval of a committee of the State Society on annuities.

WAYS AND MEANS OF INCREASING THE INCOME OF THE STATE SOCIETY AND OF ESTABLISHING TRUST FUNDS.

BY T. J. REDELINGS, M. D.,

MARINETTE.

In the deliberative bodies of this society, both executive and legislative during the past years, recommendations have been made annually to broaden the activity of the society's service. These recommendations have had in view the strengthening of our organization, the extending to its members of educational advantages, the giving to the public of sane and scientific enlightenment on matters pertaining to public health and the prevention of disease, the possibility of medical research and medical benevolence, etc. With possibly a few exceptions these recommendations have

failed to materialize into tangible form, not from lack of confidence in their merit, but because the discussions dealt with end results and overlooked the essential prerequisites to make them a possibility. No steps were taken to provide the financial support necessary to sustain the recommendation. If we may judge the future by the past there will always be a necessity for work along the lines of the recommendations I have recalled to you. It will therefore always be necessary and proper to make provision to sustain such work. In contemplating Ways and Means of increasing the income of the State Society and the possibility of establishing one or more Trust Funds, several plans have come to my mind. I realize that what I am about to propose to you is an innovation in our society's work. So far as I am able to learn it is in vogue in only a few state societies. It has, however, been the sustaining power of a number of independent societies. From my endeavors to learn what other state societies are doing or have done, I have found that the State Societies of Massachusetts and Pennsylvania are in the vanguard in this movement. The Massachusetts State Society has several Trust Funds. The Shattuck fund a gift of \$9,000, the income from which provides an honorarium for the annual Shattuck Lecturer; the Cotting fund, amounting to \$3,000, the income from which provides for lunches at the three state meetings of the council, thus promoting sociability and ensuring a large attendance; the Phillips fund of \$10,000, the income of which is for the general running expenses of the society and a permanent fund which has come from surpluses invested from time to time as they have occurred, now amounting to \$18,327.78, the income being used for the general purposes of the Society. At the present time the treasurer of the Massachusetts State Society has a fund that has been subscribed by public spirited individuals for the purpose of employing an agent to forward public health matters in the State. The subscribers to this fund are not medical men, for the most part. The agent is employed under the guidance of the Society's standing committee on Public Health.

Not including this last fund the State Society of Massachusetts now has in its several funds more than \$40,000.

The Pennsylvania State Society has a fund which it has accumulated during the past eight years which it designates "The Medical Benevolence Fund." No part of the principal of this

fund can be used until it shall amount to \$10,000. This fund was started by setting aside fifteen cents per number, but was recently reduced to ten cents.

A number of State Societies have established Defense Funds. Some of them like our own levy a special assessment, others set aside a certain percentage of the annual dues. This fund has been quite generally readily supported because each member has a personal interest in it.

The Trust Funds which I covet for the society, though less personal, are quite as essential to its greatest efficiency. The present day slogan of Preparedness and Efficiency must be heard if we mean to be ready for the demands of the future.

I have no secret method to offer by which we as a society may increase our income, but I have an abiding faith that its membership will rise to the needs of the hour and that the benevolent citizens of this State, recognizing our sincere and honest endeavor to aid humanity will gladly contribute to the support of our work when we show them the merits of our cause and claim. Our State shall not be found wanting in its support of any cause which can have only one end result and that end a public benefaction. An ennobling influence upon our profession and through it a benefaction to all its citizens.

Several methods suggest themselves to me as possible means to increase our resource.

First. Raising the annual dues of the society from two to five dollars a year. The dues not to include the defence assessment. The extra three dollars could then be apportioned to such Trust Funds as in the discretion of its members it is desired to develop. To illustrate; ten cents per capita could be set aside for Medical Benevolence; the principal of this fund should remain intact until it has reached ten thousand dollars, ninety cents per capita could be assigned to a Publicity Fund, the Principal to remain intact until it has reached fifteen thousand dollars. Two dollars assigned to an Educational Fund, the principal to remain intact until it has reached twenty thousand dollars. The remaining two dollars could be assigned to a general purpose fund for the maintenance of the society as in the past. Any surplus accruing in this fund should be invested in interest bearing securities or be assigned to the special funds for this purpose in discretion of the executive bodies of the society. Under such an arrangement on a basis of 1,800 members in ten years the society would have \$1,800 in its medical

TRAINING IN CAMP LIFE.

BY 1ST LIEUT. M. R. WILKINSON, M. D., M. R. C.

Benevolence Fund, \$16,200 in its Publicity Fund, and \$36,000 in its Educational Fund. If the money is judiciously invested during this period the society will have in addition about one-fourth of these sums at annual interest at five per cent., for use or to enlarge the principals.

It is possible that by increasing the dues the society would lose a few members but it would lose very few who are worth while.

Second. By calling for voluntary contributions from its members for specific funds.

Third. By inviting or obtaining bequests for specific purposes from the well-to-do members of our profession. This may seem visionary to you at first thought but I assure you that our membership includes as grand and as generous men as does the membership of any state society in this Union. Massachusetts and Pennsylvania have led the way.

Pennsylvania published in its journal legal information relating to such bequests and a legal form which it advised should be used in making such bequests.

Fourth. Our society may very justly and properly solicit bequests and donations from individuals known to be philanthropically inclined for such portions of our activities as specifically concern the public, for instance, work in preventive medicine and public health.

Lastly. Our society might increase its earnings by acting as a purchasing agency for its members. Such a step, however, should be taken conservatively, since the state society cannot well afford to enter the commercial field on a credit basis. It could though, on an absolutely cash basis, act as purchasing agent for its members.

Constitutional enactment can provide for the details necessary to safeguard all funds and to direct the activities for broadening the scope and usefulness of our work.

The outward part of a nettle doth sting, prickle, or burn; but the inward part (being the juice), anointed on the arteries, doth mitigate and amend the feverly heat of the heart. (Avicenna, and Arnoldus de Villanova.)

Who so use to rub their fingers between the toes of their feet, when they go to bed, especially when they smell most, and then to smell the same at their nose, it is a perfect remedy to put away the cramp. (Irish Folk-medicine.)

The above title is comprehensive but at the request of Dr. Sleyster, our State Secretary, I will attempt something for the readers of the JOURNAL upon this subject. Fort Benjamin Harrison consists of twenty-five hundred acres located twelve miles northeast by east of Indianapolis, or about nine miles from that city's limits. The main buildings, fortunately erected before the present crisis, are of red brick with white trimmings, arranged on somewhat the outlines of an elongated horse-shoe. The intervening space is an extensive lawn upon which thousands of troops can be formed and marched, and are known as the post parade grounds. The buildings make a very pretty setting upon the practically level greensward. Upon either side to the east or west, interspersed with groves and open fields, are apparently countless numbers of wooden barracks and canvas tents—with more of them going up constantly. At certain times of the day the roadways and grounds adjacent thereto are filled with a seething humanity, laborers going to or from their work, others about their work, and men in uniform going where duty or necessity calls them. Add to this, throughout the day, the many teams hauling their loads, the auto trucks hurriedly buzzing back and forth and one is not long in concluding that Uncle Sam is straining every fibre to get ready for action.

Arriving here the first of June, the medical men were divided into four companies, quartered in some of the recently constructed wooden barracks and promptly put to work the following morning learning the art of military drill, and attending classes in Army Regulations and the Medical Manual. To undoubtedly all of us, the regime was new, I refer especially to the retiring regularly at ten o'clock P. M. and rising at five A. M. It is astonishing how quickly, easily and willingly all adapted themselves to it. With the military drills, the road hikes, the lectures and the many pages in the texts to read, you can feel assured that we were ready for the cots by ten P. M., and on many nights before it, tired both physically and mentally. Such sleeps, not for years had we enjoyed anything like such restful sleeps. The midnight telephone and doorbell had ceased and

we again slept the nerve restoring sleep of youth, awaking refreshed and ready for the oncoming day's work. We were entirely under the care and tutorship of medical men, Majors and Captains in the United States Army. Here I cannot but pay tribute to their untiring devotion to their work, and their kindness and patience in the teaching of their brethren from civil life, who were utterly devoid of any knowledge of matters military.

As regards the men I must say that they were willing students and that on a hike they would vie with each other in holding up their heads and keeping the pace. On a hot day this was doing something, too, for haymakers never sweat more. When I state that practically one hundred per cent of the men stood up and improved physically under the drills and hikes, you can see that the course was adjusted to scientific nicety. Upon sanitation we had opportunity to learn much at first hand. For if there is any place in the world where sanitation in the *n*th degree is necessary it is where large numbers of the human race quickly congregate to live, as in the army. We were fortunate in having as Commander of the Medical Officers' Training Camp a man who has made years of study and observation upon the question, and is the author of one of the best works extant upon the subject. It is needless to add that sickness with us was practically a negligible quantity.

As to the social side in camp, there was a fine spirit of rivalry between the different companies, each claiming that it had the best instructor, the best membership and that it kept its barracks the neatest. This was a sort of a family feeling and though members of the companies came from divers parts of the country, complete strangers to each other for the most part, acquaintanceship ripened into friendship, which I am sure will only terminate when we cross the Great Divide.

If a woman anoint often her dugs or paps with the juice of Succory, it will make them little round and hard; or if they be hanging or bagging it will draw them together, whereby they shall seem as the dugs of a maid. (Mizaldus.)

Whosoever have their feet smell strongly, if they put the scales of iron in their shoes, wherein they use to go, it takes clean away the evil smell thereof. Georgius Fabricius.)

WAR BREAD.

The public has been led to feel some anxiety concerning the effects of the present war bread upon national health and efficiency. Suggestion plays an inevitable part in such a connection. Certain untoward symptoms in individuals, for which some other tangible cause is not immediately evident, are liable just now to be ascribed on the slenderest evidence to the bread eaten. Once the belief in a deleterious influence has arisen, it is easy to understand how widely it may spread by suggestion. In the opinion of those best qualified to know, there would seem to be little basis for any such condemnation of the bread. It rests, nevertheless, with the food controller to obtain the best possible evidence concerning the facts, and we are glad to know that Lord Rhondda and the wheat commissioners have empowered a committee of the Royal Society to make a full and thorough investigation. This committee comprises some eminent medical consultants, as well as the physiologists who have been serving on the main food committee of the society. Its task is to decide whether the higher extraction of the grain can in itself be held responsible for any disturbance of health, and whether the admixture of other cereals with the wheat has produced a less digestible loaf, owing, for instance, to the associated difficulties in milling and baking.

Among other matters which are also engaging the attention of the committee is a greater tendency to "rope" in the bread, alleged to be due to the higher extraction of the grain. The habits of *Bacillus mesentericus*, which, in its various strains, is responsible for ropy bread, are already well known to bacteriologists, and, empirically at least, to all the better informed among practical bakers. There is no reason to doubt that with the increased knowledge now being acquired any outbreaks of rope will in the future be easily controlled. That the presence in the loaf of cereals other than wheat can be directly harmful is most unlikely. A favorable effect should indeed be seen in a somewhat improved balance in the protein supplied. Maize, it is true, is said to be badly tolerated by certain individuals, though such cases must be rare. It is also stated that the starch of maize is not fully gelatinized when it is cooked in admixture with wheat under conditions suitable for the production of an all-wheat loaf.

These and other points will doubtless receive the attention of the investigating committee. Its most important task, however, will be to decide, by a thorough sifting of the evidence, the more general question as to whether the war bread is, as a matter of fact, producing any ill effects at all upon the public health. The public will be glad to know that the food controller is in possession of the facts.

Meanwhile, since it is of the utmost importance to the nation that a full supply of bread shall be maintained, while the amount of wheat available is not sufficient for the purpose, we are glad to observe that the medical press is urging the profession to see that the privilege of obtaining high-grade wheat flour for cases supposed to have suffered from the war bread is at any rate not abused.—*Nature*.

THE WISCONSIN MEDICAL JOURNAL

OFFICIAL PUBLICATION OF THE STATE MEDICAL SOCIETY OF WISCONSIN

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Annual Subscription - - - Two Dollars Single Copies - - - Twenty-five Cents

Address all business communications to THE WISCONSIN MEDICAL JOURNAL, 504 Goldsmith Building, Milwaukee

Vol. XVI.

September, 1917

No. 4

EDITORIALS

FEEDING THE SICK.

STUDIES on the metabolism of well and ill men have tended to focus attention on the great importance of scientific feeding. It was not possible to make use of the wealth of accumulated data concerning the composition of various food-stuffs until investigators had definitely determined the basal metabolism of children, adults, and the elderly, male and female, both in health and in disease. The studies of E. F. du Bois and his associates with the improved calorimeter now in use, have laid a secure foundation for the administration of food just as the labors of the experimental pharmacologists gave to medicine the methods and dosage of potent drugs.

Feeding the sick is no longer the haphazard empiricism that it used to be. It has become a science as well as an art. It is not enough to give a patient "soft diet" or "light diet," etc. Feeding should really be done on the basis of the caloric needs of the individual. This presupposes a knowledge of the caloric values in protein, fat and carbohydrate of many of the common food-stuffs. "But," you exclaim, "learn all the figures in the pages of tables? Not much!" No, that is not meant. One should know about the number of calories the patient should have, also how the calories are to be divided among the proteins, fats, and carbohydrates. The dietitian or the amateur at dietetics can then prepare food from the numer-

ous tables found in all text books on dietetics now published. For example, a prescription for diet for a patient with acute articular rheumatism who weighs about 140 lbs. would be somewhat as follows:

Total calories in 24 hours.....	2050
Proteins, 50 gms.....	200 cal.
Fats, 50 gms.....	450 cal.
Carbohydrates, 350 gms.....	1400 cal.

	2050 cal.

Water, four liters during 24 hours.

The slipshod manner of giving diet must soon be relegated to the limbo where old notions rest in peace. If we are to give our patients the sort of treatment that they should be given we must learn something about this comparatively new science of dietetics. At present most of this special knowledge is in the hands of the hospital dietitians and the teachers, students and graduates of the schools, of domestic economy. We doctors must get into the game. Even table conversation now is interlarded with terms of food economy and the public is rapidly learning about calories and caloric feeding.

Truly, we must shift our ground and pay more attention to feeding the sick and less attention to drugging the sick. It is axiomatic that most people who are sick get well and remain well without the use of drugs, but they cannot get well and remain well without food. Starvation for a limited period is also an approved therapeutic measure. Starva-

tion carried out for too long a time brings on changes which may lead to true disease.

Food supplies and food conservation now occupy the center of the stage. This is an opportune time to begin the administration of food as a therapeutic measure.

THE BUSINESS OF THE SOCIETY.

THERE is no need to remind the members of the Society that the House of Delegates is the body which transacts its business, yet it seems that this important function of the Delegates is frequently forgotten when the County Societies make their selections of their representatives. This number of the Journal will reach the members only shortly before the Annual Meeting in October. We have had occasion in a former number to call attention to certain matters likely to come up before the Delegates. The most important is the question of dues and the future activities of the Society. Possibly many of the regular Delegates will be away in the country's service. The Alternates must then familiarize themselves with the proceedings and learn from the respective societies what the members desire. Too often the business of the House of Delegates has been hampered by a Delegate who does not know what his immediate constituents want and wastes the time of the House in futile talk.

The House of Delegates is a deliberative and executive body. Time is valuable. May we hope that this year there will be less discursive talk and more actual deliberation.

CONCERNING VACCINES.

TIME was, and not so long ago, that our very most eminent members of the profession were reporting in the very best journals series of from two to a dozen cases cured or wonderfully benefited by vaccine administered subcutaneously. Poor sufferers seeing the marvelous results obtained, rushed to the clinic presided over by the eminent man and were stuck, possibly in more ways than one. It were amusing were it not in a way tragic. The few cases treated, the temporary results (good, of course), the rush into print, the rush of patients, further trials, the relapse or

death of the original "cured" cases, the gradual awakening of the doctors, at first doubt, then absolute incredulity, then more articles to prove how futile vaccines are as a method of treatment for all diseases.

This is only part of the story, unfortunately. Commercial firms ever on the look-out for new ways to make the dollar, naturally begin to manufacture these wonderful remedies. For it must be remembered that treatment by vaccines had the official stamp of the leading men in the profession. The commercial firms learned from the eminent doctors that a stock vaccine was just as good as an autogenous vaccine. Detail men swarmed into the offices of the profession and told them how to administer these marvelous new, scientific remedies. If a doctor had a case which he had begun to treat and the detail man was called out of town, the treatment had to stop until the detail man returned or until he could be reached by telephone or telegram to decide whether the next dose should be 100,000,000 or 150,000,000 killed bacteria. Let us state here and now that this is actual fact and no vaporings of the Editor's imagination.

Then the commercial firms said, in effect, "Here, if the case is somewhat obscure, or if the doctor cannot isolate the specific germ, we'll put a whole flock of germs into one mixture and call it mixed vaccine. One of the germs will be sure to hit the spot." So they did this. And many thousands of poor fellows have been jabbed with the new and wonderful and strictly scientific preparation made by the reputable firms and sold in the most cleverly constructed containers. "Add hot water and serve."

The ray of light during this period of administration was the few who refused to be swept from their equilibrium by all the printed and spoken words. A few held out, wanted more light in the shape of carefully controlled groups of cases with and without vaccination. Gradually, very gradually, the light has been coming until now the former ardent advocates of vaccine therapy are numbered among the original knockers.

It has been an interesting development. How roundly some of us have been censured because we could not see the merits of the new therapy. The days of indiscriminate vaccine therapy are passing. If we are not very much mistaken, fifty years from now it will be rediscovered and again exploited. What next?

WHAT CONSTITUTES PROSPERITY.

“**W**HAT profiteth a man that he gain the whole world and lose his own soul.” In other words what does a man gain by the accumulation of riches if he is exposed daily to the living conditions in a filthy community? Men who move from city to city are even now asking, “What is the typhoid death rate? What is the incidence of the acute diseases of childhood? What is the water supply? How are sewerage and garbage disposed of?” A time will come when a city merchants’ association will offer as the chief inducement to prospective citizens (if some have not already offered) the vital statistics and sanitary activities. Industries, land, banks, libraries, parks, etc., will come after the principal attraction.

Education is having some appreciable effect. People now want to know how they and their children will be protected from disease. They have come to expect competent service from the Health Department.

Prosperity, now-a-days, thank God, is not built for the few upon the bodies of the many. Society is half-blindly groping its way along the paths blazed by the leaders in Preventive Medicine. Were it not for crass political inefficiency we should not today have some diseases which are absolutely preventable.

The saving feature is that with all our halting and stumbling we do move forward. Even the present world war, the most terrible of calamities, has developed a spirit of sacrifice and giving which, if properly managed, bids fair to continue and redound to the good of the world.

Prosperity is after all not the millions in the bank nor the bonds in the safety deposit vaults. It is the awakened conscience of people which radiates love for their fellow-beings. Let us hope that the day will soon come when the prosperity of a community is known not by its large purse, but by its large heart.

 POST-GRADUATE MEDICAL INSTRUCTION.

We call attention to the program for County Society Post-Graduate Instruction on another page of this issue. This kind of work has been a dream of some of the active men in the Society and now the dream is to come true. The Extension Divi-

sion of the University is handling the plan and it is earnestly hoped that the County Societies will join. These lectures and demonstrations can not fail to be of great help to all who hear and see them.

There is a good start made, is it too much to hope that the momentum will increase until it takes in all the Societies? Let Rock Sleyster hear from you.

 CORRESPONDENCE

DEAR DOCTOR:—

A fellow worked a skin game on me yesterday and I think our members ought to be warned. He came in about five days ago—looking for an operation for rectal fistula and an epulis. Wanted to wait until he got some money from his brother at Dubuque, Iowa.

Yesterday he came in with check which I helped him cash, he got \$50.00 on a \$250 check. Then instead of meeting me and going to the hospital he got out of town. Name Meyers, age 60, height 5 feet 10 inches, weight about 190 pounds or more. Some edema under eyes which protrude some. Epulis size of hickory nut on lower jaw slightly to right of middle line anteriorly. Deep rectal fistula. Posed as cattle buyer and retired farmer. Will you also send notice to the J. A. M. A.? In this way we may be able to save the next fellow and some one will finally land him where he belongs.

Fraternally yours,

A. C. K.

 MEETING OF THE WISCONSIN COMMITTEE OF NATIONAL DEFENSE, MEDICAL SECTION.

At a meeting of the Wisconsin Committee of National Defense, Medical Section, held in Milwaukee, August 27, 1917, Drs. G. V. I. Brown, J. R. McDill, and C. E. Banks were appointed a committee to draft a plan for the relief of families of physicians in the government service and report to the October meeting of the State Committee.

A motion was also carried instructing the Secretary to write to the Surgeon General, asking that Health Commissioner Ruhland be placed on the inactive list and return to his duties as Health Commissioner of Milwaukee.

The following resolutions were adopted by the Committee:

Whereas, (1) We believe that the state of Wisconsin should furnish its quota of medical men for war services, and

(2) *Whereas*, We believe that so far as possible the medical needs of the civil communities should be protected in the selection of physicians for war services,

Be It Resolved, That the Councilors of the State Medical Society be requested to visit each Council of Defense in his district, and the Auxiliary Committee on Medical Preparedness, and obtain such information as is possible concerning the number and location of physicians in active practice in the County; the number and names of physicians who have already given their services for war purposes; the number and names of such additional physicians as are well qualified for war service and who could be spared with least sacrifice of civic interests; the Councilors to give this information to the Secretary of this committee and to the Examiners of the Medical Officers Reserve Corps who have been detailed to encourage enlistment of medical men in Wisconsin, and conduct their examination.

Whereas, (1) Our European Allies, having allowed their medical schools to close, deperately need a host of skilled physicians, surgeons and sanitarians. France has 300,000 cases of tuberculosis among her soldiers. Each sick man needs a well person to care for him Russia has millions of war victims most of whom lack all but the most rudimentary treatment. Great Britain's need in this respect is little less than that of France and Russia. Austria-Hungary and the Balkans countries are even worse off than France and after the war will appeal to us for medical aid in terms which we cannot resist, if we are prepared, as we should be, to supply that aid;

(2) Our own need of trained medical officers, in the pre-organization of a great national army, and in the advancement of national health standards made compulsory by the war with its revelation of the unfitness for military service of so many of our young men, and in the keen competition for commerce to follow the war, is as yet only dimly realized by the American people.

(3) This world crisis lays upon the American medical men and upon the American war administration a gigantic duty which is also a wonderful opportunity to confer world-wide benefits which will go far toward healing the bitterness of the war and toward achieving gains which will continue and increase for generations after world peace shall have been restored.

(4) As it takes seven years to make a doctor, it is imperative that the American war administration and the American medical profession act as quickly as possible to inaugurate a nation-wide movement to impress the American people with the urgency and the vital importance of this need, to formulate working programs to meet it and to procure the legislation and the funds with which to execute these programs.

(5) This obligation is no less important than that which we have assumed to equip our Allies and ourselves with fighting men, with food and with war munitions. It should be, and for the safety of our Allies, must be dealt with in the same spirit and upon the same scale as that which has been adopted in dealing with these other vital needs of the war and the post-war period. The five fingers of the fist that will win

this war can be names, men, money, munitions, health and food.

(6) We can fulfill this obligation only by increasing and strengthening the country's centers of medical, surgical, and sanitary education.

(7) Your co-operation is needed and is urgently sought in the following plan of procedure which has been suggested: That President Wilson shall be induced to

(a) Summon the American people, the states and the larger cities to give generously for the establishment of the medical centers which have been approved by the American Medical Association.

(b) Recommend to Congress the creation of a national college for the training of medical officers for the army and navy and of a National Board of Health.

(c) Arouse the State governments to their duty to support liberally a program of medical education and health measures to be proposed by the Medical Board of the Council of National Defense.

(d) Fix a time in the near future for a nation-wide drive for legislation and funds in behalf of these undertakings, emphasizing the fact that this is not an imposition upon the people's generosity, but is, instead, their first great business opportunity to share in a permanent investment which will return a thousand dollars of practical benefits for every dollar put into it, which will be a perpetual blessing to mankind, a lasting monument to their memories and a source of pride to their descendants.

Be It Resolved, That it seems to us to be the first duty of the Council of National Defense and the leaders of the American medical profession to agree as promptly as possible in urging immediate action by the Government at Washington. They must take the initiative but with recognition of the fact that the magnitude of the undertaking and its national importance requires that it be launched and sponsored by President Wilson.

ANNOUNCEMENT AND PRELIMINARY PROGRAM
OF THE STATE MEDICAL SOCIETY OF
WISCONSIN.

Milwaukee, October 3-5, 1917.

Dear Doctor —

The seventy-first annual meeting of the State Medical Society of Wisconsin will be held in Milwaukee, October 3, 4, and 5. Milwaukee is noted not only as Wisconsin's metropolis, but is known throughout the country as the best convention city in the West.

The arrangement committee has secured the Auditorium for the meeting. The growth of the Society in recent years and its division into section meetings made necessary this arrangement, as no other building could house the various activities of the organization under

one roof. All of the rooms which will be used are on the first floor and are accessible through the East entrance. The section meetings will begin at 9 A. M., October 3d, and will be housed as follows: The Surgical Section in Juneau Hall; the Medical Section in the Men's Rest Room; and the Eye, Ear, Nose, and Throat Section in the Women's Rest Room. The Commercial Exhibit, which promises to be the best and most extensive we have ever had, will be in Kilbourn Hall. The general sessions of the Society which will be held Wednesday and Thursday afternoons, and Friday morning, will be held in Juneau Hall.

Some change has been made in the usual arrangement for social entertainment. There is no set program for Wednesday evening. This is in accordance with the expressed wishes of many of the members, who prefer one evening off to attend theaters, visit with friends or relatives, or hold reunions. The banquet and entertainment will be held at the Pfister Hotel, Thursday evening. It is planned to give the guests and their wives automobile rides throughout the city, and announcement as to time will be made at the meeting. A cordial invitation is extended to the ladies, who can count on a good time.

The Pottenger Clinic, a year ago, was such a success, that those who attended it will urge you to stay over for the Tuberculosis Clinic to be held at Muirdale Sanatorium at Wauwatosa, Friday afternoon. It will give you an opportunity to attend a wonderfully instructive clinic, and to inspect the finest Tuberculosis Sanatorium in the West. Take the Wauwatosa car on Grand Avenue and ride to the end of the car line where you will be met by auto busses.

The scientific program which follows is one to tempt any man away from the year's grind. No progressive physician can afford to miss it, for it has never been excelled at one of our State meetings. The war has made this an unusual year and many important matters must be decided for the medical profession of Wisconsin at this meeting. You owe it to yourself, to your profession, and to your patients to come to Milwaukee in October. Make your plans to attend the full session, returning home Friday night. Post the enclosed card in your office now, so your patients may plan accordingly.

MEMORANDA.

1. The House of Delegates will meet in the Gold Room of the Hotel Wisconsin Tuesday evening, October 2. Delegates must register before the meeting. Please see to it that your Society is represented, for matters of extreme importance to the physicians of the State, because of the War, must be decided.

2. The first section meetings will be held in the Auditorium, Wednesday morning at 9 o'clock, and the first general session, Wednesday afternoon at 2 o'clock.

3. The Association of County Secretaries and State Officers will hold its annual "Ginger Tea", Thursday at 12:30 P. M., in the Badger Room of the Hotel Wisconsin.

4. The registration desk will be at the East entrance to the Auditorium. Report there on your arrival and receive your badge. This is the only record of attendance and the badge is necessary for entertainment features.

5. The Commercial Exhibit will be in Kilbourn Hall of the Auditorium.

6. *Entertainment.* The annual banquet and entertainment for visiting physicians will be held in the Hotel Pfister, Thursday evening. Automobile rides about the city will be given visiting members and their families by the Milwaukee physicians. Announcement of the time for this will be given at the meeting. Wednesday evening has been left open for theater parties, reunions, and so forth.

7. Muirdale Sanatorium may be reached Friday afternoon by taking the Wauwatosa street car on Grand Avenue, riding to the end of the line, where you will be met by auto busses.

8. On registering, you will designate your preference for the Medical, Surgical, or Eye, Ear, Nose and Throat section, though you may, of course, attend the different sections as the program appeals to you.

9. *A reminder:* If you have not paid your dues, it is clearly your duty to do so now. The names of delinquents will be dropped from the roll of the Society and the mailing list of the Journal, October first, and you must be in good standing to register at the meeting.

PRELIMINARY PROGRAM.

GENERAL SESSIONS.

October 3, 2 P. M.

1. Address of the President, Hoyt E. Dearholt, Milwaukee.
2. Septic Sore Throat—Galesville Epidemic, I. F. Thompson, Eau Claire.
3. The Chemical Mechanism Governing Atrophy, Necrosis, Involution and Hypertrophy, H. C. Bradley, University of Wisconsin.
4. *Address in Medicine.*
Principles and Possibilities in the Dietetic Treatment of Diabetes, Fredk. M. Allen, Rockefeller Institute, New York.

October 4, 2 P. M.

5. Spasmophilia, as Seen by the General Practitioner, W. E. Bannen, La Crosse.
6. The X-ray Findings in Lesions of the Stomach and Duodenum, Francis B. McMahon, Milwaukee.
7. Pyelitis and Pathologic Conditions of the Pelvic Organs, V. F. Marshall & J. B. Legnard, Appleton.
8. *Address in Surgery.*
Military Surgery and Bone Grafting—Illustrated by Lantern Slides and Moving Pictures, Fred. H. Albee, New York.

October 5, 9 A. M.

9. Preventive Medicine As Applied to Industry, C. H. Lemon, Milwaukee.
10. Health Insurance, A. W. Gray, Milwaukee.
11. The Medical Profession and the War, Franklyn H. Martin, Chicago.

October 5, 2 P. M.

TUBERCULOSIS CLINIC AT MUIRDALE SANATORIUM.

12. (a) H. K. Dunham, Cincinnati, Diagnosis with Interpretation of X-ray Findings.
- (b) J. S. Evans, University of Wisconsin, Clinical Demonstration of Cases. Physical findings to be checked up by Dr. Dunham.
- (c) O. W. McMichael, Chicago, Diagnosis of Tuberculosis by Palpation.
- (d) Wm. S. Miller, University of Wisconsin, Relation of the Lymphatics of the Lung to Tuberculosis.
- (e) Harry Cohn, Muirdale, Demonstration of Alpine Light Treatment.

SURGICAL SECTION.

October 3, 9 A. M.

1. The History of Goitre, H. M. Brown, Milwaukee.
2. Differential Diagnosis of Forms of Goitre, J. F. Pember & T. W. Nuzum, Janesville.
3. Surgical vs. Medical Treatment of Goitre, E. V. Smith, Fond du Lac.
4. Operative Technique in Treatment of Goitre, R. G. Sayle, Milwaukee.
5. A Plea for More Thorough Operations on the Biliary Tract. (Illustrated with Motion Pictures), D. N. Eisendrath, Chicago.

October 4, 9 A. M.

SYMPOSIUM ON FRACTURES.

6. Operative vs. Closed Method of Treating Fractures, A. H. Levings, Milwaukee.
7. Advantages and Disadvantages of the Use of Metallic Splints in the Treatment of Fractures, Carl Doege, Marshfield.
8. Bone Grafting in the Treatment of Fractures, F. J. Gaenslen, Milwaukee.
9. The Relation of the X-ray to the Diagnosis in the Reduction of Fractures, J. H. Jackson, Madison.

MEDICAL SECTION.

October 3, 9 A. M.

1. Organization.
2. Acidosis: From a Physiological-Chemical Viewpoint, Chester J. Farmer, Milwaukee.
3. Diabetes Mellitus, H. H. Milbee, Marshfield.

4. Sodium Cyanide as a Respiratory Stimulant. Demonstration, A. S. Loevenhart, W. F. Lorenz, H. C. Martin and J. Y. Malone, University of Wisconsin.

October 4, 9 A. M.

5. Election of Officers.
6. The Wassermann Test in Relation to the Diagnosis and Treatment of Syphilis, O. H. Foerster, Milwaukee.
7. The Vaccine Treatment of Typhoid Fever, Illustrated with Lantern Slides, L. M. Warfield, Milwaukee.
8. Acute Epidemic Poliomyelitis. Lantern Slide Demonstration, J. W. Nuzum, Chicago.

EYE, EAR, NOSE AND THROAT SECTION.

October 3, 9 A. M.

1. Chairman's Address, G. I. Hogue.
2. General Impressions and Treatment of Senile Cataract, Harold Clifford, Omaha, Neb.
3. The Correction of Errors of Refraction, Geo. F. Zaun, Milwaukee.
4. The Eye in Industrial Accidents, Nelson M. Black, Milwaukee.

October 4, 9 A. M.

5. Differential Diagnosis in Throat Lesions, E. F. Sauer, Milwaukee.
6. The Present Status of Tonsil Removal, H. B. Hitz, Milwaukee.
7. The Results of a Deviated Septum, and the Radical Operative Technique, C. G. Dwight, Madison.
8. Recent Progress in the Diagnosis and Treatment of Defective Hearing, Franz Pfister, Milwaukee.

THE UNIVERSITY OF WISCONSIN, UNIVERSITY EXTENSION DIVISION.

POST-GRADUATE MEDICAL INSTRUCTION.

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 Pres., State Medical Society.
 C. A. Harper, M. D.,
 Sec., State Board of Health.

*Recent Advances in the Diagnosis and Treatment
 of Diseases of the Heart and Lungs.*

A course of three lectures with six illustrative clinics and laboratory exercises and opportunity for conferences and consultations. One lecture, two illustrative clinics and two laboratory exercises will be given during the week of September 10-15, a second set during the week of September 17-22 and the third during the week of October 15-20. The lectures and clinics will be held at Fond du Lac on Mondays and Tuesdays of each week and repeated at Oshkosh on Wednesdays and Thursdays and at Appleton on Fridays and Saturdays. A full mimeographed set of notes of the lectures and a full outline of the clinics and demonstrations will be furnished those taking the course so that if any exercise is missed, the gap may be filled by these notes and outlines. The fee for the course of three lectures, six clinics, and six laboratory exercises is five dollars. *Application for the course should be made to Dr. Rock Sleyster, Wauwapun, Wisconsin.* Registration ticket entitles holder to attend at any of the teaching centers.

Outline of Courses.

First Week.

Clinics on diseases of the lungs.

1. St. Agnes' Hospital, Fond du Lac, Sept. 10, 9-11 A. M.
2. St. Agnes' Hospital, Fond du Lac, Sept. 11, 9-11 A. M.
1. Lakeside Hospital, Oshkosh, Sept. 12, 9-11 A. M.
2. Lakeside Hospital, Oshkosh, Sept. 13, 9-11 A. M.
1. St. Elizabeth's Hospital, Appleton, Sept. 14, 9-11 A. M.
2. St. Elizabeth's Hospital, Appleton, Sept. 15, 9-11 A. M.

Laboratory demonstrations, conferences, and consultations. Stereoscopic X-ray pictures of various stages in the development of pulmonary lesions. Demonstration of newer practical laboratory methods.

1. St. Agnes' Hospital, Fond du Lac, Sept. 10, 2-4 P. M.

2. St. Agnes' Hospital, Fond du Lac, Sept. 11, 2-4 P. M.
1. Lakeside Hospital, Oshkosh, Sept. 12, 2-4 P. M.
2. Lakeside Hospital, Oshkosh, Sept. 13, 2-4 P. M.
1. Science Hall, Lawrence College, Appleton, Sept. 14, 2-4 P. M.
2. Science Hall, Lawrence College, Appleton, Sept. 15, 2-4 P. M.
- Evening. Lecture on recent advances in the diagnosis and treatment of diseases of the lungs. How to avoid common errors in the differential diagnosis between bronchiectasis, pneumonia, tuberculosis, and syphilis of the lungs.
1. St. Agnes' Hospital, Fond du Lac, Sept. 10, 8 P. M.
1. Lakeside Hospital, Oshkosh, Sept. 12, 8 P. M.
1. Science Hall, Lawrence College, Appleton, Sept. 14, 8 P. M.

Second Week.

Clinics on disease of lungs.

3. St. Agnes' Hospital, Fond du Lac, Sept. 17, 9-11 A. M.
4. St. Agnes' Hospital, Fond du Lac, Sept. 18, 9-11 A. M.
3. St. Mary's Hospital, Oshkosh, Sept. 19, 9-11 A. M.
4. St. Mary's Hospital, Oshkosh, Sept. 20, 9-11 A. M.
3. St. Elizabeth's Hospital, Appleton, Sept. 21, 9-11 A. M.
4. St. Elizabeth's Hospital, Appleton, Sept. 22, 9-11 A. M.

Laboratory and X-ray demonstrations, conferences, and consultations. Demonstration of the simpler laboratory methods that a physician can best make for himself and how to prepare specimens for special study at central laboratories.

3. St. Agnes' Hospital, Fond du Lac, Sept. 17, 2-4 P. M.
4. St. Agnes' Hospital, Fond du Lac, Sept. 18, 2-4 P. M.
3. St. Mary's Hospital, Oshkosh, Sept. 19, 2-4 P. M.
4. St. Mary's Hospital, Oshkosh, Sept. 20, 2-4 P. M.
3. Science Hall, Lawrence College, Appleton, Sept. 21, 2-4 P. M.

4. Science Hall, Lawrence College, Appleton, Sept. 22, 2-4 P. M.

Lecture. Recent advances in the diagnosis and treatment of diseases of the lungs. Steps to be taken in the more difficult differential diagnosis of acute pulmonary conditions.

2. St. Agnes' Hospital, Fond du Lac, Sept. 17, 8 P. M.

2. St. Mary's Hospital, Oshkosh, Sept. 19, 8 P. M.

2. Science Hall, Lawrence College, Appleton, Sept. 21, 8 P. M.

Third Week.

Clinics on diseases of the heart and circulatory organs.

5. St. Agnes' Hospital, Fond du Lac, Oct. 15, 9-11 A. M.

6. St. Agnes' Hospital, Fond du Lac, Oct. 16, 9-11 A. M.

5. Lakeside Hospital, Oshkosh, Oct. 17, 9-11 A. M.

6. Lakeside Hospital, Oshkosh, Oct. 18, 9-11 A. M.

5. St. Elizabeth Hospital, Appleton, Oct. 19, 9-11 A. M.

6. St. Elizabeth Hospital, Appleton, Oct. 20, 9-11 A. M.

Laboratory and X-ray demonstrations, conferences and consultations. X-ray pictures illustrating various common and rare cardiac lesions. Demonstration of recent developments in the use of blood pressure apparatus.

5. St. Agnes' Hospital, Fond du Lac, Oct. 15, 2-4 P. M.

6. St. Agnes' Hospital, Fond du Lac, Oct. 16, 2-4 P. M.

5. Lakeside Hospital, Oshkosh, Oct. 17, 2-4 P. M.

6. Lakeside Hospital, Oshkosh, Oct. 18, 2-4 P. M.

5. Science Hall, Lawrence College, Appleton, Oct. 19, 2-4 P. M.

6. Science Hall, Lawrence College, Appleton, Oct. 20, 2-4 P. M.

Lecture. "Recent developments in the diagnosis and treatment of cardiac conditions." How cardiac conditions may lead to diagnosis of trouble elsewhere in the body and may sometimes best be treated by treating the primary lesion. Present status of vaccine treatment of infections. Diag-

nosis and treatment of derangements of the musculature and nervous mechanism of the heart.

3. St. Agnes' Hospital, Fond du Lac, Oct. 15, 8 P. M.

3. Lakeside Hospital, Oshkosh, Oct. 17, 8 P. M.

3. Science Hall, Lawrence College, Appleton, Oct. 19, 8 P. M.

Grind mustard with vinegar, and rub it well and hard on the palms of the hands or the soles of the feet, and it will help and quicken forgetful persons. (Petrus Hispanus. He was Pope John XXI.)

SCHOOL HEALTH SERVICE.

Common sense demands that the health service for public school children as well as for the parochial school children of Milwaukee be handled by the city health department. Certainly it is absurd to continue duplicate city departments, one doing this work among the public schools, the other providing the same service in the parochial schools.

It is equally apparent that, as between a special division of the school department and a division of the city health department, the latter is the proper body to handle the whole work. Questions of hygiene and sanitation, whether they concern children or grownups, are primarily for the city health department, just as matters of education are essentially for boards of education.

Matters of school hygiene, moreover, are inseparable from conditions of home sanitation. In fact, the health of the child depends more upon conditions in the home than upon conditions in the school. The former undoubtedly belong within the sphere of the city health department. Also, it should be noted, the control of contagious diseases and of housing conditions requires the exercise of police power, which is not possessed by the school board.

Added to these considerations, is the fact that the school board has no legal right to undertake medical inspection in the parochial schools, whereas the health department has the power to carry on this work in both public and parochial schools.

The time has come to place the entire school health service in the hands of the city health department. It would effect a considerable saving, would improve the service and would save us from what has been aptly called "the educational department store."—*Milwaukee Journal.*

You shall stay the bleeding of the nose, if you write with the same blood in the forehead of the party that bleeds, these words following: "*Consumatum Est!*" (Irish Folk-lore.)

THE STATE MEDICAL SOCIETY OF WISCONSIN

ORGANIZED 1841

Officers 1915-16

H. E. DEARHOLT, Milwaukee
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NEXT ANNUAL SESSION, MILWAUKEE, OCTOBER, 1917

The Wisconsin Medical Journal, Official Publication

LIST OF EXECUTIVE OFFICERS OF COUNTY MEDICAL SOCIETIES.

County.	President.	Secretary.
Ashland-Bayfield-Iron	C. J. Smiles, Ashland	O. Braun, Ashland.
Barron-Polk-Washburn-Sawyer-Burnett	H. M. Coleman, Barron	I. G. Babcock, Cumberland.
Brown-Kewaunee	I. E. Levitas, Green Bay	E. G. Nadeau, Green Bay.
Calumet	E. L. Bolton, Chilton	C. L. R. McCoilum, Forest Junction.
Chippewa	C. W. Wilkowski, Chippewa Falls	F. T. McHugh, Chippewa Falls.
Clark	H. H. Christofferson, Colby	E. L. Bradbury, Neillsville.
Columbia	O. O. Force, Pardeeville	A. F. Schmeling, Columbus.
Crawford	C. B. Lumsford, Gays Mills	A. J. McDowell, Soldiers Grove.
Dane	Frank Drake, Mendota	L. H. Prince, Madison.
Dodge	R. E. Bachhuber, Mayville	E. S. Elliott, Fox Lake.
Door	H. C. Siblee	T. C. Proctor, Sturgeon Bay.
Douglas	D. R. Searle, Superior	L. A. Potter, Superior.
Dunn-Pepin	A. F. Heising, Menomonie	G. C. Nedry, Menominie.
Eau Claire	H. F. Derge, Eau Claire	L. H. Flynn, Eau Claire.
Fond du Lac	G. B. McKnight, Fond du Lac	F. M. McGauley, Fond du Lac.
Grant	J. C. Doolittle, Lancaster	M. B. Gasier, Bloomington.
Green	W. B. Nagni, Monroe	L. A. Moore, Monroe.
Green Lake-Washara-Adams	G. E. Baldwin, Green Lake	J. A. Wiesender, Berlin.
Iowa	G. H. McCallister, Avoca	J. R. Hughes, Dodgeville.
Jefferson	A. A. Busse, Jefferson	W. A. Engsborg, Lake Mills.
Juneau	Brand Starnes, Mauston	A. T. Gregory, Elroy.
Kenosha	C. R. Caughey, Kenosha	J. F. Hastings, Kenosha.
La Crosse	G. W. Lueck, La Crosse	J. M. Furstmann, La Crosse.
Lafayette	J. C. Hubenthal, Belmont	H. O. Shockley, Darlington.
Langlade	M. J. Donohue, Antigo	J. C. Wright, Antigo.
Lincoln	H. G. Hinckley, Merrill	D. B. Reinhart, Merrill.
Manitowoc	J. F. Pritchard, Manitowoc	Louis Falge, Manitowoc.
Marathon	W. A. Green, Wausau	F. H. Frey, Wausau.
Marinette-Florence	H. F. Schroeder, Marinette	Luella E. Axtell, Marinette.
Milwaukee	P. F. Rogers, Milwaukee	Daniel Hopkinson, Milwaukee.
Monroe	A. R. Bell, Tomah	Spencer D. Beebe, Sparta.
Oconto	C. W. Stoelting, Oconto	T. C. Clarke, Oconto.
Oneida-Forest-Vilas	W. C. Bennet, Rhinelander	C. A. Richards, Rhinelander.
Outagamie	G. A. Ritchie, Appleton	M. E. Rideout, Appleton.
Ozaukee	E. E. Coerper, Fredonia	C. E. Balkwill, Grafton.
Pierce	W. A. Lumley, Ellsworth	R. U. Cairns, River Falls.
Portage	W. W. Gregory, Stevens Point	J. D. Lindores, Stevens Point.
Price-Taylor	H. M. Nedry, Medford	E. B. Elvis, Medford.
Racine	J. H. Hogan, Racine	Susan Jones, Racine.
Richland	C. F. Dougherty, Richland Center	Glendon Benson, Richland Center.
Rock	T. W. Nuzum, Janesville	E. B. Brown, Beloit.
Rusk	Julian C. Baker, Hawkins	L. M. Lundmark, Ladysmith.
Sauk	F. D. Hulburt, Reedsburg	Roger Cahoon, Baraboo.
Shawano	J. B. Gordon, Shawano	W. H. Cantwell, Shawano.
Sheboygan	Otho Fiedler, Sheboygan	C. N. Sonnenburg, Sheboygan.
St. Croix	B. Kunny, Baldwin	O. H. Epley, New Richmond.
Trempealeau-Jackson-Buffalo	G. F. Stack, Independence	C. F. Peterson, Independence.
Vernon	J. K. Schreiner, Westby	F. E. Morley, Viroqua.
Walworth	M. D. Cottingham, Lake Geneva	Edward Kinne, Elkhorn.
Washington	J. G. Hoffman, Hartford	A. H. Heidner, West Bend.
Waukesha	H. A. Peters, Waukesha	S. B. Ackley, Oconomowoc.
Waupaca	W. Irving, Manawa	G. T. Dawley, New London.
Winnebago	J. W. Lockhart, Oshkosh	E. H. Hunt, Oshkosh.
Wood	Ed. Hougen, Grand Rapids	W. M. Ruckle, Grand Rapids.

SOCIETY PROCEEDINGS

A meeting of the Fond du Lac and Dodge Counties Medical Societies was held at Fond du Lac, at the Chamber of Commerce on August 28th. Plans for a series of lectures were considered and clinics to be conducted under the auspices of the University of Wisconsin. Dr. Rock Sleyster, Secretary of the State Society, was present and outlined the proposed course. The course which will include lectures and clinics, will consist of eight separate events, two to be given a week. The sessions are to be held at St. Agnes Hospital.

TRI-STATE DISTRICT MEDICAL SOCIETY.

The annual meeting of the Tri-State Medical Society was held at Dubuque, Iowa, September 4, 5 and 6, and was one of the largest and finest medical meetings held in the middle west. Over two thousand invitations were sent out announcing the meeting. Wisconsin physicians on the program were: Drs. L. R. Head, Madison; Wilson Cunningham, Platteville; T. W. Nuzum, Janesville; W. D. Stovall, Madison; W. A. Munn, Janesville; Robert White, Prairie du Chien; W. T. Lindsay, Madison; D. R. Connell, Beloit; A. S. Lovenhart, Madison; Rock Sleyster, Waupun; C. R. Bardeen, Madison and John F. Pember, Janesville.

NEWS ITEMS AND PERSONALS.

DR. H. M. COLEMAN, Barron, President of the Barron-Polk-Washburn - Sawyer - Burnett County Medical Society and Dr. E. S. Christman, Almena, have received a lieutenant's commissions in the Medical Officers Reserve Corps, U. S. A.

DR. H. A. HALSEY, Hills, has gone to Wyoming, Ohio, where he expects to enter the U. S. Army, Medical Department.

DRS. F. C. HUFF, Sturgeon Bay, and J. S. FOAT, Ripon, captains in the Medical Officers' Reserve Corps, have received orders to report at Ft. Riley, Kansas, for a course of training.

Lieutenants J. W. Boren, Marinette, H. E. Saylor, Merrill; C. J. Combs, Oshkosh, and C. C. Rowley, Winnebago, are at Ft. Riley, Kansas, for a several months course of training in the Medical Reserve Corps.

Drs. Peter L. Scanlan, Prairie du Chien; John William Smith and George Fitzgerald, Milwaukee; James Conley, Racine; James E. Heraty, Bloomington; Edgar Bedford, Sheboygan and Lyman Steffen, Antigo, have received commissions as 1st Lieutenants in the Medical Officers' Reserve Corps.

DR. HARRY GREENBERG, Milwaukee, who has been in training at Ft. Riley, Kansas, for the past two months, returned to Milwaukee August 6th and resumed his practice.

DR. FRANK POMAINVILLE, Grand Rapids, has arrived in France and taken up work in one of the war hospitals.

The following members of Milwaukee Base Hospital have been called into active duty and are assigned as follows: Dr. Otho Fiedler, Sheboygan, Rockefeller Foundation, New York City; Dr. George Ruhland, Fort Sill, Okla.; Dr. Harry S. Gradle, Ft. Sheridan; Drs. Ralph Gilchrist, Ulrich Senn, W. J. Egan, Edward Rueth, Harry Foerster, J. J. Brook, and G. M. Fitzgerald, Ft. Riley, Kansas, and Dr. R. H. Ivy, Surgeon General's office, Washington, as assistant to Maj. V. P. Blair, who has charge of the organization of war surgery of the face and jaws. As soon as the Milwaukee Base Hospital is called into service these officers will be released and will go with their unit.

DR. C. C. DELMARCELLE, Neenah, has been appointed to a 1st Lieutenancy in the Medical Corps, National Guard. Dr. M. N. Pitz, Juneau, has arrived in Neenah, and taken charge of Dr. DelMarcelle's practice during the latter's absence.

Three Green Bay physicians have entered the nation's service. They are Drs. J. E. McGinnis, D. F. Gosin and F. J. Gosin, and have been ordered to report for duty at Ft. Riley, Kansas. All hold commissions as 1st Lieutenants in the Medical Officers' Reserve Corps.

DR. T. D. SMITH, Neenah, in a cablegram recently received, states that he has left London and is now in France ready to begin work.

DR. J. L. YATES, who left Milwaukee in June for work in the war hospitals of France, is now in Belgium.

DR. J. W. MONSTED, New London, has joined the National Guard and is now at Camp Robinson, Sparta, Wisconsin.

DR. NELSON M. BLACK, Milwaukee, has been appointed a major in the Medical Officers' Reserve Corps, and by order of Secretary of War Baker,

has been assigned to active duty in the office of the Surgeon General in charge of Ophthalmology as a subdivision of the section on surgery of the head.

FIRST LIEUTENANT GERIARD A. BADING, former mayor of Milwaukee, has been ordered to report for duty at Fort Riley, Kansas.

Broadhead's three physicians, Drs. E. J. Mitchell, Geo. S. Darby and L. B. Rowe, have offered their services to their country, and are in training at Ft. Riley, Kansas.

DR. B. N. ROBINSON, Prairie du Chien, who has recently been in training at Ft. Sheridan, has received an appointment as captain in the Third Infantry, Wisconsin National Guard.

DR. JOHN J. McSHANE, Kenosha's first commissioner of health, who resigned his position less than two years ago to accept a call to be commissioner of health at Akron, Ohio, has resigned that position and entered the service of the U. S. He is the medical officer in charge of Camps Lincoln and Lowden and medical and sanitary officer of Camp Chanute, the aviation camp at Rantoul, Ill.

DR. JUSTIN D. LEAHY, Milwaukee, has discontinued his practice, and accepted a commission as 1st Lieutenant in the Medical Department, U. S. Army. He is stationed at Washington, D. C.

Recent appointments by the War Department to the Officers' Reserve Corps, Medical Department, are as follows: Major, Robert C. Brown, Milwaukee; First Lieutenants: P. G. Lasche, Richland Center; S. J. Driessel, Barton; George Bordeaux, Spooner; S. G. Schwarz, Humbird; Frank H. Kennedy, Greenwood; R. C. Rodecker, Holcombe; John F. Schneider, Oshkosh; I. V. Grannis, Menomonie; H. C. Miller, Whitewater; Paul H. Fowler, Plain; Frank W. Pope, Racine; J. C. Johnson, Ogdensburg; L. A. Vander Linde, Wautoma; M. J. Treichler, Hancock; W. A. McEachron, Superior; D. G. Hugo, Oshkosh; T. Miller, Oconomowoc; E. S. Knox, Bowler; J. E. Boland, Two Rivers; Harry C. Saltzstein, Milwaukee; Frank J. Hager, Denmark; J. W. Christensen, Westby; John H. Hogan, Racine; W. H. Remer, Chaseburg; E. C. Howell, Fennimore.

DR. CHARLES A. YATES, Bangor, has resigned as a member of the La Crosse County Exemption Board, and left for Ft. Riley, Kansas, to enter the Officers' Training Camp at that place.

DR. E. D. ANGELL, athletic director, Milwaukee Normal School, has resigned his position to enter government service as a navy surgeon. He will be assigned to duty on the Great Lakes.

DR. HUBERT S. STEENBERG, Milwaukee, has received a commission as captain in the Medical Officers' Reserve Corps. Dr. Steenberg is a veteran of the Spanish American War, having served as a member of the Second Wisconsin Regiment.

DR. WILLIAM P. SALBREITER, 1st Lieutenant in the Racine Ambulance Company, who accompanied that unit to Camp Douglas and Waco, Texas, is now attached to Field Hospital Company No. 1.

DR. F. W. ALPIN, assistant physician, Waukesha Springs Sanitarium, who recently received a commission as Lieutenant in the Medical Reserve Corps, has been assigned to duty at Ft. Riley, Kansas.

DR. I. G. BABCOCK, Cumberland, is reported critically ill with diphtheria.

DR. HARRY HEIDEN, has taken charge of the practice of Dr. Otho Fiedler at Sheboygan.

DR. J. FRANK BENNETT, formerly at the Milwaukee County Hospital and at Muirdale, has been appointed assistant physician at the South View Hospital, Milwaukee.

DR. E. J. BREITZMAN, who has been working in the hospitals at Chicago and Columbus, Ohio, has resumed practice at Fond du Lac.

DR. C. F. HESS, Stoughton, is defendant in a malpractice suit brought by Mrs. Albertine Finke of the town of Vermont. Mrs. Finke alleges that as the result of a facial operation performed by the defendant the left side of her face is paralyzed, and she demands damages to the extent of \$5,000.

DRS. ANTHONY VOSKUIL, Cedar Grove, and John Hess, Waldo, are defendants in a \$15,000 damage suit. The plaintiff, Mrs. Minnie Bruin, of

Sherman, alleges improper treatment of a fractured leg.

DR. WILLIAM H. SCHNELL, Superior, has been appointed junior local surgeon for the Minneapolis, St. Paul and Sault Ste Marie Railway at Superior.

DR. C. H. VAN HISE, Madison, has been elected the University member of the State Board of Education, succeeding Lieut.-Col. Gilbert E. Seaman, Milwaukee.

WAUKESHA, WISCONSIN, on August 30th reported a case of spinal meningitis.

MOUNT SINAI HOSPITAL, Milwaukee, is a beneficiary under the will of the late Abraham Slimmer, Waverly, Ia. Under the will the hospital is bequeathed \$100,000. Mr. Slimmer's previous gift of \$50,000 made a few years ago, made possible the erection of Mount Sinai Hospital, and the present splendid bequest will enable its directors to still further enlarge the work of the institution.

The erection of a \$90,000 building for children in connection with Muirdale Sanitarium, Milwaukee County's institution for the treatment of tuberculosis, was recommended to the county board at a recent meeting of the committee on county and state institutions.

The Loofbourow Hospital, Monroe, which has been closed for some time, is again to reopen. A representative of the Evangelical Association of North America, and financial head of the Deaconess Society and Hospital, located in Chicago, under an agreement with the owner recently leased the building for an indeterminate period.

Chicago is considering plans for a "reconstruction hospital" with 3,000 beds and vocation schools for "making over" men wounded in the trenches. Edmund J. James, president of the University of Illinois is backing the plan.

The Milwaukee Health Department is in receipt of the following letter from Surgeon General Rupert Blue. "In view of the present situation you are requested to take every precaution to prevent the improper use of certain organisms." He specifies them minutely. "You are especially requested not to send out, during the period of the

war, cultures of virulent pathogenic organisms, except to those for whom you can personally vouch, and to caution such persons as to subsequent use and distribution. In cases where you are unable to vouch for applicants for cultures, it is suggested that you refer requests to the hygienic laboratory of the public health service, or to the United States Department of Agriculture, Bureau of Animal Industry, for final action."

Preparations for emergency work against outbreaks of epidemics in cantonments are being made under the direction of the medical advisory committee of the Red Cross War Council. The committee has decided to equip five railroad cars to be used as laboratories. Each car will have a staff of experts and will be so stationed at various cities that any camp may be reached by one of these laboratory cars within twenty-four hours on receipt of request from federal or state authorities.

Steps to care for thousands of cases of tuberculosis being brought to light by the examinations of the national army registrants, and the prevention of disease in military camps, are being taken by the National Association for the Study and Prevention of Tuberculosis. Dr. H. A. Pattison of Rockford, Illinois, has been appointed a new medical field secretary to organize preventive work in the camps and to endeavor to get lists of men rejected on account of tuberculosis. He will seek to arrange for the care of these men and their dependents in their home communities.

The American Association of Orificial Surgeons hold their annual meeting in Chicago at the Congress Hotel, September 27, 28 and 29. The morning hours are devoted to surgical clinics at Ft. Dearborn Hospital. Afternoons and evenings to papers and round tables.

The War Service Committee of the Medical Women's National Association has organized the American Women's Hospitals for work at home and abroad. The Surgeon-General of the Army and the General-Director of the Department of Military Relief of the American Red Cross have approved the provisions made for service to the army and to the civil population. The work will be officially part of the medical and surgical service of the American Red Cross.

The scope of the plan is a broad one. It includes units for maternity service and village practice in the devastated parts of the Allies countries

and hospitals run by women for service there as well as for the United States army in Europe. In this country acute and convalescent cases will be treated in hospitals equipped for the purpose; soldiers' dependents will be cared for, interned alien enemies will be given medical aid and substitutes will be provided to look after the hospital service and the private practice of physicians who have gone to the front. The first units hope to go to France and to Servia in the early fall. Headquarters have been established at 637 Madison Avenue, New York City. Dr. Rosalie Slaughter Morton is chairman of the War Service Committee.

A war meeting will be held at Washington, D. C., Oct. 17-20, 1917, by the American Public Health Association. This will replace the annual meeting which was to be held at New Orleans, Dec. 4-7, 1917.

The papers and conferences will deal largely with the health problems created by the Great War—the food supply, communicable diseases among soldiers, war and venereal disease, war and the health of the civil population, etc. Those interested are urged to reserve hotel accommodations at once. Any hotel or railroad can give a list of Washington hotels. Preliminary programs will be automatically mailed to all members of the A. P. H. A. about September 15th. Non-members may receive them by addressing The American Public Health Association, 126 Massachusetts Avenue, Boston, Mass.

At the direction of Surgeon General Gorgas a conference of Military Roentgenologists was held at Cornell Medical College, New York City, recently. This conference was ordered with a view to standardizing X-ray apparatus and arranging courses of study in roentgenology. Major Arthur C. Christie, from the Surgeon-General's office and Major P. W. Huntington from the Army Medical School represented the Army. The instructors, who will have charge of the various schools in various parts of the country, were present together with members of the committee on Preparedness of the American Roentgen Ray Society.

The Chicago School of Military Roentgenology is in charge of Captain Edward S. Blaine, M. R. C., who has been ordered to active duty. The instruction will be given at Cook County Hospital. The territory included in the range of this school comprises Illinois, Wisconsin, Northern and Western Michigan, Western Indiana, Minnesota, East-

ern Iowa, North and South Dakota. Other schools have been established in Boston, New York, Philadelphia, Baltimore, Richmond, Pittsburgh, Kansas City and Los Angeles. The following information is given for the benefit of those interested:

The government is going to give special training in X-ray work to selected officers of the Medical Reserve Corps. They will be detailed on pay according to rank for the period of instruction. The length of the course will be about three months, but officers who have had considerable experience in X-ray work or those who become proficient before the end of the course will be certified to the Surgeon-General as soon as they have become qualified. Those who show lack of adaptation of application will be relieved from this detail and assigned to other duties or discharged by order of the surgeon-general.

Those desiring to take up this work will proceed as follows: (1) Write a letter to the nearest school immediately indicating your preference for this X-ray course, stating your experience in the work. (2) Make application for a commission in the medical reserve corps, U. S. Army through the nearest recruiting medical officer. (3) Write a letter to the Surgeon-General, attention Major Christie, asking to be placed on this X-ray instruction detail at the nearest school and attach this letter to the papers which are sent in at the time of your examination for the commission. (4) When you have received your commission accept it and write a letter to the nearest school stating that you have received and accepted it and are ready for active duty.

The government is going to the expense of training these selected men as military roentgenologists and will, therefore, be desirous of using them in this capacity in the field, base hospital or other detail, to the greatest possible extent.

The United State Food Administration announces the creation of an Advisory Committee on Alimentation, the purpose of which is to gain the active co-operation of experts in the determination of policies of food control from the standpoint of the science of nutrition. The Committee consists of C. L. Alsberg, Russell H. Chrittenden, C. F. Langworthy, Graham Lusk, LaFayette B. Mendel, and E. V. McCollum.

The United States Food Administration announces the creation of an Advisory Committee

on Public Health. This Committee has been created because the Food Administration, realizing that the nutrition of a people and the condition of its food supply bear intimate relations to the general problems of public health, sought the advice of experts in these lines. Dr. Welch has been named as Chairman of the Committee, the personnel of which is as follows: Leonard P. Ayer, Herman Biggs, David T. Edsall, Cary T. Grayson, A. Walter Hewlett, T. C. Janeway, F. G. Novy, Richard M. Pearce, William H. Welch, and H. Gideon Wells.

MARRIAGES

Dr. H. Terlinden, Bonduel and Miss Alydia Hoge, Jackson, August 24th.

DEATHS

Dr. Kate S. Kavanaugh, a former resident and practicing physician of Menomonie, died at her home in Minneapolis, August 16, 1917, aged 63 years. Dr. Kavanaugh was born in New York State Jan. 1, 1854, and came to Sheboygan County with her parents in 1864. She was graduated from Hahnemann Medical College, Chicago, in 1891, and entered upon the practice of her profession at Boyceville the same year. During her residence there she held the office of postmaster for several years. In 1905 she moved to Menomonie, and continued in active practice there for five years. Desiring a wider field she moved to Minneapolis in 1910.

REMOVALS

Dr. W. C. Nason, Omro to Clinton.

Dr. W. D. Harvie, Neenah to Oshkosh.

Dr. Jeremiah Donovan, Forestville to Milwaukee.

Dr. Smiley Blanton, Madison to Children's Hospital, Randalls Is., N. Y.

Dr. F. B. Taylor, Mt. Sterling to Madison.

Dr. H. C. Werner, Fond du Lac to Union Grove.

Dr. Fred A. Marrs, Say Brook, Ill., has located at Stevens Point.

DEPARTMENT OF NURSING

Conducted by Miss Stella Fuller, 566 Van Buren St., Milwaukee, Wis. Please address items of news and articles for this department to the editor of the department, 566 Van Buren St., Milwaukee, Wis.

EDITORIALS

Summer has come and gone; with the Autumn days there will be the usual "speeding up" the desire to do better work.

There are many ways of taking "fresh hold" of the every day tasks but none seems better than attending conventions.

There are four important meetings to be held this fall. The Mississippi Valley Conference which is to be held in Minneapolis on October 8th, 9th, and 10th; annual meeting of the Wisconsin State Graduate Nurses' Association, which will meet in Milwaukee October 9th, 10th, and 11th; the State Medical Society meeting in Milwaukee October 3rd, 4th, and 5th; and the annual meeting of the Wisconsin Anti-Tuberculosis Association in the early part of November.

Lets go!

WHO'S WHO AND WHY.

THE STORY OF LINDA RICHARDS.

The time was 9 o'clock in the morning of September 1, 1872. The place was a small hospital located in one of the busy sections of the city of Boston. The person, a young woman about to enter that newest profession for women, Trained Nursing.

Rather timidly she approached the door of the hospital and rang the bell. Her call was answered by a maid who directed her to the reception room, telling her to wait there until the doctor came to see her.

She had not long to wait before a very dignified, pleasant little lady appeared and introduced herself as Dr. Dimock. She led the way through a corridor, where one caught occasional glimpses between partly closed doors, of rows of white beds, and up a flight of stairs where a nurse met them. After introducing Miss Linda Richards, Dr. Dimock said: "This is our first nurse to enter the training school."

At the end of two weeks, this New England Hospital for Women and Children was moved to

its present location at Roxbury, Massachusetts. Here, in the new building accommodating sixty beds was established the first training school in America.

Miss Richards tells of the training: "The hours on duty for nurses were from 5:30 in the morning until 9:00 in the evening with no particularly appointed time off duty. If the wards were light, nurses might go out with some degree of regularity. Their rooms were between the wards. If the work was hard they had charge day and night. There were no regular hours off, no time off on Sunday. An afternoon off duty was given every two weeks. The nurses wore washable dresses, but not a uniform. The practical instruction was given by a young woman interne. If we did badly the interne was told to give us further teaching. The instruction often amounted to a consultation between interne and nurse as to the best way of doing the service in question.

"The appliances were not like those of today. For instance, the thermometers were large, clumsy things which bent at right angles and which had to be left in the axilla for fifteen minutes before the temperature could be read and then it must be read before removing the thermometer. It was indeed discouraging when a patient, wishing to help the nurse, upon seeing her go toward the bed would take out the thermometer, hand it to the nurse and say with a smile: "There, nurse, I have taken it out for you." There was nothing left for the hurried and often tired nurse to do but to take the thermometer and replace it for another fifteen minutes.

"Great care was taken that we should not know the medicines given; they were numbered only.

"Our practical instruction was very largely given by Dr. Dimock, who was most careful in every detail. We were carefully told, then watched, and corrected if we made a mistake. We had no text books and no examinations. The course of training covered one year. We were simply given a diploma when we got through."

In October, 1874, following the completion of her training, she became night superintendent at Bellevue Hospital. At that time no records were kept and there were no written orders; it was Miss Richard's notes for one of her nurses that started the practice of keeping records and writing orders.

At the expiration of her year there, she went to Boston to take charge of the training school at Massachusetts General Hospital. And so it came

about that the first American training school for nurses gave to the Massachusetts General Hospital its first graduate superintendent of nurses.

Miss Richards remained in Boston for two and a half years and when she left to study training school work in England the Boston school was on a permanent basis.

On her return from England in 1878 she organized the training school of the Boston City Hospital. In 1885 she was sent to Japan and opened at Kioto, the first training school for nurses in Japan. Miss Richards remained until 1890. The school increased from five nurses to twenty nurses in training. When she left, the school passed into Japanese hands. She may be regarded as having laid the foundation for trained nursing in Japan.

Miss Richards has been continually called from one hospital to another either to organize a new school or to build up one that was undeveloped.

When one looks backward over all the years, when so much has been accomplished, and thinks of the many facilities at hand now to make the training of nurses so efficient, one wonders at the fact that the principles taught and the underlying common nursing procedures have remained the same. And the thought comes that firm indeed must have been the first foundation.

Let us not forget to give all honor to the first trained nurse of America, Miss Linda Richards.

WOMEN IN INDUSTRIAL LIFE.

BY MR. FRANK WICKS,

SUPERINTENDENT WESTINGHOUSE LAMP WORKS,

MILWAUKEE.

It is not my intention to deal with this subject in a comprehensive manner, or to present scientific data, but to discuss it along general lines looking toward the betterment of the conditions of women in the industrial field.

The industrial growth of this country has been phenomenal. The great variety of growing industries has taxed our resources of male labor to such an extent that employers have been induced to permit women to enter the industrial field. At first women entered industry rather slowly, but as the condition brought about by our tremendous growth became more acute women were substituted for men wherever and whenever in the opinion of

the employer it could be done to advantage. Keen competition and mercenary methods may originally have had something to do with it, but the fact that woman's household occupations have been made easier or lighter is probably the predominating cause for women entering industry.

In the early days manufacturers were rather reluctant to take women into their establishments, yet gradually it became apparent that women could fill some positions as well as men. As the employment of women became more general their attitude towards industrial labor changed materially. Apparently they have become more independent until now they are filling positions in nearly all lines of industry.

Specialization is the trend of the present time. In an industrial plant this policy is being followed out in detail. In producing an article composed of many parts it is so divided that each separate part, or small group of parts, may be made by a special department. The work to be done in each department is further specialized or simplified that the operation may be taught in a reasonably short time. This detailed specialization enables the introduction of semi-automatic or automatic machines, which greatly increases the output. Many different small parts of a machine or other manufactured article could be made by boys, other parts of the same article, such as castings or machine work, require the services of men. Some of the lighter parts of intricate detail requiring good judgment that formerly have been handled by men, can be done equally as well, or sometimes better, by women. The manufacturers take these factors into consideration and industries are now undertaken with the expectation of employing women to perform many operations.

What are some of the conditions that an employer should consider when employing women? The most important one is the tenure of employment. Various estimates have been made as to the period of employment of women, whatever the true average may be the fact remains that the time is comparatively short when compared with that of male labor. This factory is of prime importance to the manufacturer inasmuch as it directly affects his operating expenses. There is a definite cost incident to the training of employees. There is a measurable cost due to the loss of material handled by inexperienced operators. It is therefore highly desirable that the period of employment be extended, as this would result in better quality of

product and lower costs. The far-sighted manufacturer, realizing that the period of employment for women is short, will study methods whereby he may conserve his employees and make their period of service of longer duration.

THE MANUFACTURER'S DUTY TO SOCIETY.

Conservation of Health.

Manufacturers are waking up to the fact that physically unfit employees are not efficient. They are commencing to realize that the policy of hiring and firing costs money and leads to social unrest. They are commencing to realize that a human machine needs more attention than an automatic machine. They are commencing to realize that owing to the scarcity of labor, our human resources must be conserved; that they cannot obtain 100% perfect employees; that they must take the majority of the human machines that come to them for employment and mould them into good and efficient employees; that this can only be done by humane treatment; by utilizing scientific data that are available and may be had for the asking; by gaining and holding the confidence of their employees; and by giving them a square deal. A manufacturer who continues to apply slave driving methods; who ruthlessly wears out his human machines then casts them aside; who refuses to recognize existing conditions and will not remedy them, will eventually find himself in a position where he will not be able to compete with those who are progressive; with those who realize that efficiency can only be obtained when employees enjoy good health and are treated humanely. He must keep pace with the times.

The factors which are the most important in the conservation of our human resources, are as follows:

1. Fair compensation.
2. A work day based on due consideration of the important item of fatigue.
3. Ventilation and sanitation.
4. Properly lighted work rooms.
5. Physical examination.
6. Education.
7. Personal hygiene.
8. Environment.

FAIR COMPENSATION.

At the present time, in many instances, women do not receive compensation in proportion to services rendered when compared with compensation for similar work done by male help. In many cases, employees who do not receive fair compensation, are deprived of the actual necessities of life, live under conditions that are detrimental to health, are dissatisfied with their positions and become "floaters" who are continually seeking new places of employment. They are never efficient. Inadequate compensation tends to shorten the period of employment.

WORK DAY BASED ON DUE CONSIDERATION OF FATIGUE.

There is a limit to the number of hours a human being can work and be efficient. We used to work from daylight to dark. We worked at a moderate pace, retired early and lived wholesome lives. The pace of today is much faster. The specialization of operations makes for simplicity but calls for greater effort. Long continued effort at high speed may result in injury to health. Opinions as to how many hours shall constitute a day's labor vary considerably—some say ten hours, some nine and others eight. The present agitation for an eight hour day has led to a careful study of the problem. Manufacturers are entitled to and should receive due consideration in its solution. They are vitally interested and should co-operate with labor to the fullest extent in the attempt to solve the problem. If eight hours per day will tend to conserve our human resources, this plan should be adopted. Undoubtedly data will be available within a reasonable time enabling us to decide the question on its merits.

VENTILATION AND SANITATION.

State legislatures have frequently recognized the necessity of requiring certain standards of sanitation in industries and enforcing them by law, as there are still some manufacturers who will not make improvements without compulsion. Education and occasional enforcement of the law will bring about a more rapid solution of this problem. Whatever is done to conserve the health of the employees will tend to lengthen the period of employment.

PROPERLY LIGHTED WORK-ROOM.

This problem has not received the attention in the past that it warrants. In many cases the vision of employees has been affected and their efficiency impaired by improper lighting. It is a well established fact that increased output and better quality result when work-rooms are properly lighted. It is also a well established fact that adequately lighted work-rooms have resulted in a marked decrease in the number of accidents occurring in industry. Scientific lighting is difficult to determine owing to the varied conditions that exist in industrial plants. An illuminating engineer should be consulted and a constructive educational campaign waged, if our human resources are to be conserved and the period of employment lengthened.

PHYSICAL EXAMINATION.

Good health is of vital importance to industry. Frequently employees are assigned to work which they are physically unfit to perform efficiently. A physical examination at the time of their employment would reveal their true condition and enable them to be assigned to positions where they can render service consistent with their physical strength. In some of the larger plants it has been found practical to hire a doctor to do this work, and to take care of the sick or disabled. Some of this work can be performed by professional industrial nurses. An employer can do much along this line to conserve the health of his employees, thereby retaining their services for a longer period.

EDUCATION.

Many large industries have found that education of male help has been profitable. Besides training their apprentices, other educational courses are sometimes maintained for their employees. While such a policy undoubtedly brings advantages to the manufacturer because it enhances the efficiency of employees, yet another and perhaps a greater advantage results. Young men and women are thereby tied firmly to the interests of their employer by a spirit of loyalty; their close knowledge of the employer's output and methods of production creates a feeling of being at home within his establishment. In many cases this means a life term of employment. The education of women within an industry has not been specialized to the same extent as in the case of men. The short in-

dustrial career is probably the reason. Having no reliable statistics at hand, let us suppose that the average total period of employment for women to be five years. If this entire time could be utilized by a single establishment, might it not prove profitable to apply some of the educational features to women which are now applied to men. Again, suppose that the average total period of employment of women could be lengthened to ten years, would it not seem reasonable and advantageous to undertake a more comprehensive plan of education? Many executive positions in industry now being filled by men, could be as well filled by women if the term of employment were long enough to warrant the expense of education. The longer the term of employment, the more valuable women will become to industry.

PERSONAL HYGIENE.

A careful investigation of the causes of poor health among female employees shows that lack of proper care of the body is responsible in many cases. Parents are largely to blame for such conditions. Lack of knowledge, large families, wrong method of living and straitened circumstances are some of the contributory causes. Industrial nursing aided by the distribution of simple pamphlets treating on this subject and the co-operation of organizations, such as are represented here, would seem to be the best means of counteracting the results of existing wrong conditions. The subject is a delicate one to handle and calls for common sense, a broad gauge policy of diplomacy combined with a campaign of education that can be carried into the homes to bring about desired results.

ENVIRONMENT.

There is something about a rainy day that is depressing. I have visited many industrial plants that remind me of rainy days. Bare walls and gloomy surroundings do not make for good quality nor maximum output. Most of us enjoy and appreciate pleasant days outside—they inspire us to greater efforts—they make us feel that life is worth living. Why not carry some of the sunshine into our industrial plants, provide cheerful work-rooms with plenty of light, finish the interiors in light colors that are pleasing and restful. Make the exteriors attractive. Cover the walls with vines, have a little grass, a few flowers and shrubs around the building. These things are inexpensive

and do not hurt property values, yet women who in particular seem to appreciate the beauties of nature perhaps might care to extend the period of their employment under such conditions.

Summarizing, it appears that while women have become an important labor factor in industry, yet they are at present handicapped somewhat by the fact that their industrial career is comparatively short. The employer is glad to avail himself of their services, but for the most part he must utilize them in positions where they can be replaced without too great an expense. While this condition continues to exist, it is not likely that the difference in compensation of men and women will be equalized. However, if the period of employment could be lengthened, employers would find it to their advantage to offer inducements to women and be willing to train them for executive positions. Under such circumstances it is probable that their value to industry would be materially increased.

NEWS ITEMS AND PERSONALS

The Milwaukee County Nurses Association will hold its first meeting of the season at the Club House, 566 Van Buren Street, on Tuesday, September 11th at 8 P. M. There will be the regular business meeting, with reports from local Alumnae Associations, and reviews of current Nursing Journals.

Miss Ethel Nightman and Mr. Frederick Wergin will sing and Miss Stella Fuller will speak briefly on Food Conservation. The Program Committee will act as hostesses at all meetings of the year.

Mrs. Harry Hoswell Wurster (Miss Mae Johns), who was employed as a county nurse in Chippewa County previous to her marriage in July, has joined her husband in Panama.

Miss Viola Nohr, Merrill, Wisconsin, and Miss Miriam Walker of Neenah, are taking individual instruction in Public Health Nursing with the Wisconsin Anti-Tuberculosis Association.

The first District Sanatoria Conference of Wisconsin was held at the Sherman Hotel, Appleton, Wisconsin, on September the eighth. Dr. C. D. Boyd, visiting physician of the River View Sanatorium at Kaukauna. Miss Helen Scheller, superintendent of the Winnebago County Sanatorium, Miss Elizabeth Leenhouts, in charge of the Out-Patient Department of Muirdale Sanatorium, Miss Emma Conley, of the University Extension Department and others, took part in the program.

Plans are being made to continue these conferences in different sections of the state with the hope that better

co-operation may be the means of solving some of the problems that now confront sanatoria workers.

Dr. Frank Brockway, former superintendent of Wales Sanatorium, will begin a course of lectures on tuberculosis to the nurses of the Theda Clark Memorial Hospital in Neenah. All local nurses are being invited to attend.

Graduating exercises of the Theda Clark Memorial Hospital Training School for Nurses will be held at the Kimberly High School on September 3rd at 8 P. M.

The Fox River Valley Nurses' Association is making an effort to secure the membership of every eligible nurse within the territory and to secure a large attendance at the Annual Meeting of the Wisconsin State Graduate Nurses' Association to be held in Milwaukee on October 9th, 10th and 11th.

Miss Frances Heinrich has come to Muirdale to take the position of Superintendent of Nurses. She is a graduate of the Augustana Hospital of Chicago. After her graduation she became assistant superintendent of the St. Luke's Hospital at Cedar Rapids, Iowa. For 2 years Miss Heinrich was the head field nurse in the Tuberculosis Municipal Dispensary of Chicago, afterwards becoming assistant superintendent at the Municipal Tuberculosis Sanatorium of that city. Miss Heinrich's extensive experience in tuberculous work will make her a valuable asset to the inadequate force of the Wisconsin Anti-Tuberculosis workers.

BOOK REVIEWS

PREVENTIVE MEDICINE AND HYGIENE. By Milton J. Rosenau, professor of Preventive Medicine and Hygiene, Harvard; Director of the school for Health Officers of Harvard University and the Massachusetts Institute of Technology; formerly Director of the Hygienic Laboratory, U. S. Public Health Service, etc., with chapters upon sewage and garbage, by George C. Whipple, professor of Sanitary Engineering, Harvard. Vital Statistics by John W. Trask, assistant Surgeon-General, U. S. Public Health Service. Mental Hygiene by Thomas W. Salmon, Medical Director, National Committee for Mental Hygiene, etc. Third Edition containing a special section on Military Hygiene. D. Appleton & Co., New York and London, 1917. Price \$7.00 net.

This third edition by Dr. Rosenau containing chapters by three collaborators is truly a monumental work and is particularly timely. There is nothing in the realm of the subject which the author has not touched upon. Especially valuable at the present time is the section on Military Hygiene in which is taken up the Diseases of the Soldier. One must not look for symptoms in such a book. It deals purely with the preventive side of Medicine. It is a welcome addition to the large number of textbooks because it is different and treats of matters which are of vital interest and importance to public health.

The large size of the volume is unfortunate but this is a minor matter when one considers the weight of the material therein contained.

EXPERIMENTAL PHARMACOLOGY. By D. E. Jackson, Ph. D., M. D., Associate Professor of Pharmacology, Washington University Medical School, St. Louis, Mo. Profusely illustrated with 390 illustrations including 24 full-page color plates. C. V. Mosby Co., St. Louis, Mo. Cloth, \$4.00.

This laboratory manual, primarily of interest to teachers of pharmacology, is, by every test of honest comparison and actual classroom use, the best and most inclusive guide for student purposes published today.

Greene's Laboratory Guide, widely used, is excellent but too limited in its scope. Sollmann's recent publication of a separate volume, containing laboratory exercises as a companion for his Manual of Pharmacology, is extensive enough, even exhaustive from the point of view of the time at students disposal, invaluable in many ways—but lacks the splendid illustrative material—nearly 400 original illustrations including 24 full-page color plates—so dominantly characteristic of Jackson's work. Another outstanding feature of the book is the reviewing of certain fundamental principles of anatomy, chemistry, physiology and pathology immediately applicable to the study of pharmacology.

Though decidedly prerequisite to the course in pharmacology it is just as wise as it is necessary for the instructor to help the student in recalling certain vital and frequently exceedingly elementary facts he has previously been taught and is supposed, but erroneously, to know and know so well that he can immediately apply them to an experiment in pharmacodynamics.

It is approved pedagogy for the teacher in the higher and highest classes constantly to recur to subjects the student has already covered especially in pointing out their relation and application to the subject in hand. This pedagogic principle Jackson has constantly in mind.

Alike the physician, whose laboratory course in pharmacodynamics was meagre or nil, and the recent graduate with extensive laboratory training will be markedly benefited and interested in reading certain easily selected portions and studying some interesting plates and tracings clearly indicating a drug action at a glance.

IMPOTENCY, STERILITY, AND ARTIFICIAL IMPREGNATION. By Frank P. Davis, Ph. B., M. D., fellow American Medical Association; Ex-secretary Oklahoma State Board of Medical Examiners; Former Superintendent Oklahoma State Institution for Feeble Minded; author of "How to Collect a Doctor Bill," "The Doctor: His Book of Poems," "The Physician's Vest-Pocket Reference Book," etc.; formerly editor and publisher, Davis' Magazine of Medicine. C. V. Mosby Company, St. Louis, 1917. Price \$1.25.

This very short incomplete and extremely sketchy consideration of these important subjects requires but little mention, being hardly more than an outline containing nothing whatever which is new upon the subject, and is altogether too brief and sketchy to be considered as any contribution to medical literature.

B. B. R.

The Wisconsin Medical Journal

Volume XVI

MILWAUKEE, OCTOBER, 1917

Number 5

ORIGINAL ARTICLES

PRESIDENTIAL ADDRESS, WISCONSIN STATE MEDICAL SOCIETY.*

BY HOYT E. DEARHOLT, M. D.,

MILWAUKEE.

The past year has doubtless wrought more fundamental changes in values than any other year in the history of the State Medical Society of Wisconsin. It has been a year in which century old traditions have been forsaken in a day and slowly built social structures deliberately shattered with no more than momentary hesitation. While the two years which preceded served to prepare us in a measure for the ordeal of participating in an unspeakably horrible world revolution, the shock of actual, open-eyed entry into such a maelstrom has nevertheless been tremendous.

Grave responsibilities weigh heavily upon the shoulders of every American man and woman. To none are greater responsibilities given than to the members of the medical profession. For, while the thought and ideals of other scientific professions are centered primarily in plans of destruction, it is given to us to do what we may to guard the army against the handicap of the physically unfit who would break under the strain of war conditions and to salvage the hulks which shot and shell make of the physically strongest human types. Never has mankind turned to us so trustingly and concordantly as it now does in its suffering and helplessness. We have therefore an unheard of obligation. But we have likewise an opportunity such as has never hitherto been laid before us.

I purpose, therefore, to devote the major portion of the time that is permitted me for the Presidential Address to a consideration of the manner in which we, as a group of scientific medical men, can best meet that demand, justify that trust and play that large part in national and world history which medicine must assume.

But before discussing that theme, I wish to digress long enough to express my own feeling of responsibility and obligation. When you raised me to the highest place among you as your president, you did not know what a crisis in our history was impending. Otherwise, you must have chosen a wiser head and a more worthy representative. That, in nowise lessens, but enhances rather, my personal appreciation of the great honor you conferred upon me with that election. To none of my illustrious predecessors could it have meant so much. For most of them, it was a quite natural recognition of their pre-eminence in the science of medicine; for me, it has meant an expression of sympathy upon your part with groping aspirations for a better articulated socio-medical order represented by the work of my associates and myself in the two institutions I have the honor to serve. I cannot hope for ability nor sufficient time to repay my debt to you for the inspiration and sense of personal dedication your honor has conferred, but I do hope that I shall have the opportunity to serve you faithfully and to your profit as a private in the ranks to which I return at the end of the year.

The state of war in which this nation exists is daily teaching us new truths and giving new significance to old truths. From earliest childhood we have been taught that America belongs to the *people*. Some accepted the ownership as naturally and with no more gratitude nor sense of obligation for the privilege it afforded than a child commonly exhibits to his parents for the living, education and other advantages they furnish him. It took a national campaign of education to arouse the public consciousness to the justice and rightness of the principle of military conscription—to drive home a well defined realization of the fact that the people belong to the country no less than the country belongs to the people. And right here, though not all of us have yet heard it, the death knell was struck for vested rights in the private possession of the benefits of medical science and in the privileges of health. When a nation assumes

*October 3, 1917.

the right to draft her most physically fit citizens and compel them to risk life and health in the service of the balance of the citizenship, she places a premium upon physical unfitness which is most unjust to the strong. The latter must be conceded the right to demand in return that, in any government based upon the consent of the governed, the authority and resources of the nation be employed to reduce the number and proportion of weaklings if only that the chances in the lottery of conscription be reduced to the most favorable gambling odds. It is a short step from this point to conceive of such a nation faced with such a necessity assuming that medicine belongs quite as much in the domain of public ownership as do highways and waterways and all other forms of public property.

I would not be understood to infer that physicians, as a class, have ever held a narrow and selfish view concerning the proprietorship of medical science. On the contrary, I am prepared to defend the statement that far more than almost any other professional group, physicians have recognized and proclaimed the common ownership by humanity of the established truths and new discoveries in which they deal. Almost never has a real contributor to original medical knowledge sought to monopolize the reward which would have resulted from patent, copyright or trade secret. Neither has the profession countenanced withholding, for lack of monetary reward, the personal benefits the science might confer upon an individual. On the contrary, the charity of physicians is everywhere manifest and is most inspiring.

And yet I am not content that medical charity should exist. Further than that, I doubt if medical charity can exist in a satisfactory form. It is incompatible with the conception of the common ownership of medical science. The public realizes the inconsistency even though it cannot put its finger upon it. Therefore, it has withheld from us the opportunity of conferring the full measure of service that our science is capable of. Mankind dies before its time and suffers beyond its need because a satisfactory method of exchange has not yet been devised by which it can pay an equivalent for what it might receive from medical practitioners. The fairly well established estimate of Irving Fisher and other economists that human life could be lengthened by fifteen years by utilization of existing knowledge is proof of this.

I have spent much time in recent years in con-

templating possible means by which a greater and more profitable utilization of the knowledge and other resources of the medical profession could be brought to bear in securing a greater lengthening of valuable life and a more rapid reduction of needless suffering and illness. The complexity of the problem has been borne in upon me from an unknown number of its angles and I cannot pretend to have arrived at a solution in anywise satisfactory to myself, far less at one which I might hope to demonstrate to the mutual satisfaction of the medical profession and the employing public.

And yet we must find a solution, or at least a remedy—and that promptly. The necessities of the world in its present crisis call for the doing of hitherto impossible things. Industry has been doing the wellnigh impossible in support of war and the havoc that war imposes. We can do no less in efforts to conserve the lives and health of all who are affected by war.

The times call upon us to meet a many-sided obligation with an all-round competency. First, we must serve the Nation's army until it has fulfilled the purpose to which it has been dedicated by our president. Next, we must serve and keep physically fit the workers who furnish the backbone of industry and transportation without which the army could not survive, as an army, for a single day. At the same time, we may not neglect the lives and health of soldiers' families and of the rest of the civil population, which we cannot forget are no less valuable in times of war than in times of peace. And finally, we must play a most important part in the reconstruction of the world after the devastation of war has ceased.

Whatever form the solution of this complex problem may take, one thing about it is clear. It must be true to science. It must mesh on the one side with the gears of medical science and on the other side with those of the science of political or social economy; in other words, with the economic laws which govern, in the words of a dictionary, "the production, distribution and consumption of all products, necessary, useful or agreeable to man, that have exchangeable value."

There can be no difficulty, I am sure, in establishing the fact, either before a medical or a non-medical audience, that medical science is one of the *products* of mankind which is *necessary* to mankind. The wisest distribution of its benefits is a problem which is governed absolutely in its larger

aspects, not by whims nor considerations of narrow personal interest, but by the laws of the broad science of economics. "Economics," according to another definition, "includes the discussion of all of the numerous factors which make life profitable, whether to the nation, or to the business, or to the individual man."

The discussion of that part of economics which relates to the distribution and utilization of the benefits of medical science, and for which the organized medical profession is accountable, might be called "Medical Economics". If I may be permitted to paraphrase a definition, "Medical Economics" may be said to be that branch of Economics which includes the consideration of the possession and distribution of the wealth of medical science and its wise utilization in the interest of humanity, the nation, the community, the family and the individual.

While the war lasts, "Medical Economics" will be concerned primarily with both the production and the distribution of a great increase of medical service to offset the destruction of health that war, directly or indirectly, is accomplishing. After the war, as I have suggested above, it will find its place in the work of reconstruction and of advanced construction in a war-scarred world. Upon American medicine, and hence upon Wisconsin medicine, will fall a large measure of the responsibility of solving the disease problem of the entire world. Dr. Pritchett of the Carnegie Foundation is doubtless correct in endorsing the statement of a member of the official French Commission which visited America some months ago, that for ten years after the war is over, even France must look to America for physicians, hygienists and sanitarians. It is high time, therefore, that we begin to prepare to meet the responsibility which there is no honorable means of avoiding.

This will call for the introduction of revolutionary changes in the management of our medical resources. The ability to increase production and distribution rapidly so as to meet the tremendous demand will be governed by conditions similar to those which have limited or expanded production of food, guns, airplanes, ships, explosives and other war munitions; in a word, our immediate problem is one of *economic organization*. The need for this economic organization is the more imperative because it existed long before the war began

and will continue long after the war is over. Wise emergency organization to meet war needs will, therefore, never be wasted.

In the first place, we start out upon the task of meeting a greatly increased demand for medical service—shorthanded. This shortage in the number of competent, trained practitioners, which the world is facing today, is not consequent solely nor mainly upon the number who have been killed in action. Apparently, these losses have been greatly exaggerated. For some time before we entered the war, there were unmistakable evidences of a shortage, due to the rapid expansion in the field of the physicians' activities, to increased demands of industry, hospitals and clinics, public and social service, and to the longer periods spent in training. With us, the greatest factor has undoubtedly been the reform in medical education which swept through this country a few years ago.

The reduction in an amazingly short time by one-half of the number of medical schools and the further reduction in the number of students in many of even the best schools changed the ratio of doctors to population to such an extent that it cannot but have far-reaching consequences. The full effect was not at once apparent nor is it yet, by any means. But the time is nearing when, even without the extraordinary drafts war has made upon us, the deaths of the older doctors would have brought out vividly the fact that enough physicians have not been graduated in recent years to completely fill the vacant places—at least numerically.

Shorthanded, then, even for the needs of peace times, we face the additional needs of war. And it is not possible nor desirable, even under the stress of war-imposed conditions, that we attempt to recruit numbers too rapidly. What we have gained in character of medical education has cost too much to be discarded lightly. Further on, I shall have more to say, concerning the methods of increasing man-power. But, of far greater immediate importance is the consideration of means of conserving the time and energy of the existing practitioners by eliminating lost motion and needless duplication of effort. Here, as I see it, lies the real solution to our problem, a solution easily demonstrable by the known conditions of peace times and possessing therefore a stronger appeal to our reason than if it were based solely upon hypothetical surmises concerning the future. Our war-time problem is our peace time problem, intensified and

manifolded. Its solution demands our recognition of the fundamental fact that up to the present time, wastes have been allowed to go on which make much of the work of physicians unprofitable to them notwithstanding the fact that, even so, the cost is prohibitive to many who have great need of the service that physicians could render.

When the hardpushed head of a family in the laboring class, for example, is required to pay a full day's wage, or more, for a few minutes' service of a physician whose daily earnings do not net a great deal more than those of his patron, there is waste somewhere in the service line which must be stopped. The physician is entitled to receive for valuable service all that his patients may be justly required to pay, but neither he nor the patient should be willing to pay for undue waste or preventable leakage. Nor can such wastage be paid for indefinitely and life be maintained. The members of society cannot continue subsisting entirely on one another any more than can a snake successfully feed itself by swallowing its tail. Our American natural resources in health, like our natural resources in forests, coal and other possessions, have been so great that, in the past, we have been able to survive wastes which would have annihilated a less fortunately situated people. But now society cannot much longer ignore the fact that a means must be found by which the cost of adequate service—nothing less than this is acceptable—can be furnished at a profit to its dispensers and yet at a figure the honest and conscientious consumer can pay without ruination or mortgaging the future of himself and family. Modern business has done this so effectively, in many instances, that the pauper of today enjoys many luxuries beyond the dreams of kings a century back.

In industry the three great instrumentalities for increasing production and reducing cost, and hence stimulating absorption of the product by the public have been combination, specialization and elimination of waste. Doubtless, we can find, by a study of so-called efficiency methods employed in scientific management of large commercial and industrial business, many plans which with minor adaptations, we could utilize with equal profit. In scientific industrial management the term "peak and valley load" has been used to describe an accounting on the wastage which finds a parallel in the practice of medicine, as it is now commonly

conducted. In the operation of an electric service company, for example, there are hours when the generating machinery has to be kept in expensive operation for a relatively small number of patrons. This is known as the valley load. This is alternated with stress hours and seasons when the patronage is so great that it taxes the full production facilities of the entire plant. This is known as the peak load. The medical profession's parallel lies in the days, weeks and office hours in which the physician is rushed to his uttermost limits. These periods of physical and mental stress are offset by others of demoralizing semi-idleness. Like the electric company, the family physician cannot close shop during the slack seasons but must be on call at the touch of the button. In the instance of the electric company, brains, money, advertising and even price reduction are employed to stimulate patronage during slack hours and thus straighten out the service line. In the new order of scientific and economical management of medical service there will come into being equally effective methods for leveling the up and down waves of patients' demands—particularly so, when the full possibilities of preventive medicine by means of periodic examinations and more refined and leisurely diagnostic methods are fully realized and grasped by the profession itself and by the employing public.

No time need to be taken here to discuss the advantages of specialization because they are well recognized by physicians, but in industry, specialization is most successful when employed together with combination, as it likewise is in public hospitals and clinics. We all have observed instances in which intensive specialization has needed to be corrected in order that the true perspective be established, and correct judgment formed in a given disease problem. For the suggestions they offer I should like to recite from the history of industrial organization one or two notable illustrations of marvelous accomplishments through combination. By amalgamating eighty distilleries, the whiskey trust was able to close sixty-eight plants without loss of production. Indeed, through efficient and economical management, it has been possible to so increase the productiveness of the remaining twelve as to make the output far exceed the former production of the entire eighty. Similarly, the sugar trust was able through combination to supply the entire market with one-fourth

of the refineries that existed under independent ownership and management.

I believe that the combination of physicians into selected and well balanced groups would prove equally satisfactory, in fact it has been proven to be so in public and private medical charity work. For the conduct of the physicians' private work combination would insure more stability, greater assurance of reasonable financial reward, a degree of satisfaction altogether too uncommon under present methods of practice, and the possibility, on the death of one of the members of the combination, of there being continued, in the interest of his heirs, the established patronage his ability and conscientious service established.

It was the last consideration which led to the invention of the business corporation. When patronage of commercial and industrial business was also mainly on a personal basis, proprietors hesitated, as we do, to capitalize and conduct their enterprises on an adequate scale. The pressure upon them was such, however, as I firmly believe it now is on us, that a means was required by which a man could put the very last dollar of his capital into his business and conduct it singlemindedly up to the day of his death or retirement as a reasonably secure, self-perpetuating institution. Had it not been for some such means as the corporation affords, the business man would have continued to do as we do, operate on meagre equipment and put as large a proportion of each year's income as he could squeeze out of his own business into outside securities. Previously, I imagine his accounts receivable, his stock and equipment were worth little more after his demise than are those of a deceased physician. A long series of personal and family histories, extending over many years and kept with the accuracy that goes into the bookkeeping, cost accounting and other efficiency systems of modern business, would in itself constitute an heritage of, as yet, uncalculated value. For the public, the syndicating of physicians would give a greater assurance of a uniformly high grade of service and a promise of even a great reduction of cost through equitable distribution of the savings accomplished through economical management and employment of labor and time economising machinery.

Let us consider specifically a few of the obvious immediate benefits which would accrue through combination and the consequent possibility of

eliminating costly duplication of parallel equipment. Beginning with the overhead office expense, the size and equipment of a reception room for a group of physicians, as is being demonstrated practically everywhere, need not be so very much larger than a single physician requires. The salary paid to a highly specialized and cultured office woman by no means equals the aggregate amount that is required in individual offices by a number of slatternly and immature women of the type who are content to serve in offices which require but a relatively few minutes of real work but many hours of confinement and boredom. The saving in telephone rates, considerable as it is, is overshadowed by the greater advantage that comes to physicians and clientele alike from having an intelligent personality, capable of exercising judgment and displaying tact, sympathy and initiative on occasion, at the physician's end of the wire. Few individual practitioners can carry the cost of an office nurse, a laboratory technician, a drug dispensary attendant, a competent stenographer and filing clerk. A relatively small number by pooling their needs could conjointly finance the acquisition of these refinements.

It will doubtless be urged by some of my listeners that these are *only* refinements. To which I would retort, if given the opportunity, that I grant that the workman is more important than his tool but that I do not admit the superiority of the average mechanic to some of the machines which produce quantity, quality and precision of output that no human facility is capable of. It is inconceivable that our prototype, modern industry, could have reached its present marvelous accomplishments had not gigantic forges and presses been substituted for the brawny, right arm of the blacksmiths.

But it is not in the equipment of physician's offices that I am primarily interested, except as it forms a medium through which the highly organized brain and skillful hands of the competent physician can function completely. It is in the combination of complementary abilities that I am most concerned and in the possibilities of accomplishing results through harmonious team play that would be inconceivable by singlehanded efforts of even the giants among us.

Team play. Do not the words conjure up visions of thrilling accomplishments in the realms of sport, finance, art, science, education, philanthropy, man-

ufacture, commerce, transportation, discovery and countless other fields of human endeavor? Do they not fire your blood with a zeal to do your part in bringing Medicine into her own, toward the fulfillment of the prophecy made by Descartes more than 250 years ago that "if any great improvement in the condition of mankind was to be brought about, medicine would provide the means"?

Economic combinations would be as common among physicians, today, as they are in other lines of human endeavor had the medical profession felt acutely the great incentive which originally drove industries into combination, viz., ruinous competition. And in the future, there will be even less competition among physicians if I am correct in the hypothesis upon which I have based my discussion, that there is a shortage of physicians. Another stimulus, therefore, will be required. It will be furnished by the ideal which drives every truly professional man to render the highest possible quality of service, not because in the narrow sense it pays necessarily to do so, but because he can do no less and retain his self-respect. And it is part of the pride of membership in our profession that it is in this spirit rather than in narrow calculating self-interest that we shall find the impetus for the revolutionary work that lies before us,—for the work is revolutionary and will call for the sacrifice of more than one cherished tradition.

The real obstacle to combination and organization of physicians lies in the difficulty of subordinating oneself to the will and direction of superior intellect and ability, and fusing one's individual interests into the form of organic life and composite personality which characterizes a real team. These are not such difficult things to do if one has entered service young, when one's inferiority is manifest, and been trained and disciplined to acknowledge and respect authority. But the older of us have been independent so long and considered by our clientele to be the equal, at least, of any in our community that nothing short of a very great purpose would give one the fortitude to make a sacrifice of prestige and leadership—even though these be in a very small realm. It seems a reasonably safe prediction to make, however, that as time goes on the advantages and satisfaction to be secured through combination and team play will be found to more than offset the privilege of extreme individualism if the latter

must be purchased by a self-consciousness of inferiority.

Neither are the possibilities of a medical man's entry into team work confined to leadership of, or subordination to, other medical men. The shortage of physicians, together with the increased demand for medical service, makes necessary new conceptions of the conditions of practice. The statement was made above, that it is not desirable to recruit our thinning ranks too rapidly. By that I meant that there must be no lowering of those bars to entry into the privileges and responsibilities of practising medicine, which give at least some guarantee to patrons of a fair degree of education on the part of their medical advisors. And yet it is my personal belief that economical organization and division of labor calls for the profitable employment of a far larger number of assistants, who are not graduates of medical schools, than have been employed in the past.

In the laboratories it has been found that technicians are quite likely to be more skillful and reliable in their tasks of limited scope than is the average graduate physician. If so, it is most wasteful to employ a well trained and scholarly physician upon a routine task which requires only special training of a few weeks or months. And yet such wastes are going on throughout the work of physicians. Take the refracting of eyes for example. The medical profession has correctly taken the position that it is not safe to entrust diagnosis of eye conditions to mere artisans who do not comprehend the possible relationship between impaired vision and obscure, but grave, systemic diseases. Nevertheless, there are thousands of children and adults needing only simple corrections for whom it would have been impossible to pay the necessarily considerable cost of highly specialized medical service.

Our policy in meeting this economic situation in the past has been, according to my personal opinion, merely negative in character. Had we employed as our assistants the mechanics, who now refract eyes upon an independent sub-professional basis, we should have met a real public need in a constructive manner and at the same time have kept the control where the interest of the public demands it should be, in responsible hands. Under such an arrangement, far greater opportunities than ever have obtained would have been ours for the more important diagnoses and for the treatment of those cases in which only the judgment of

a highly cultivated medical specialist suffices. Without knowing a great deal about it, and nothing from personal experience, I nevertheless feel certain that altogether too much precious time is wasted by physicians in work at the trial case which a low salaried and single minded office assistant might do as well, or conceivably even better because he or she would not be distracted by opportunities which would give play to the very highest faculties. I am equally well convinced that time and energy of high grade diagnosticians are wasted in personal house visits and in administering treatments which, frequently, a young man of the hospital house-physician type, or even a young woman of the visiting nurse type, might do as well.

While I have almost boundless faith in the possibilities of combination and specialization in medicine, functioning under a system of scientific management, to supply the need of humanity for complete medical service, it has seemed doubtful to me if medical men alone could furnish the necessary initiative. It has been this doubt which has made me, among others, study hopefully the proposal of compulsory health insurance as possibly containing, in admittedly imperfect form, the essentials of an efficient system of administering medical service at the time when it is needed and through payments which the recipients can make. There can be no question of the need of sickness insurance, whether it be compulsory or voluntary in character. The two fundamental principles upon which insurance of any nature is based are as applicable to sickness as they are to any other form of casualty. These are, first, determining expectancy of sickness liability—remarkably constant for a number large enough to absorb the law of chance, but incalculable for a single individual—and distributing the cost of meeting it equitably among all of the number; second, dividing the assessments and timing the payments when they can be borne most easily. We must not be blinded by the fact that both physicians and patients have been, and are being, exploited in the interest of sick benefit societies which are in effect mere abortions. Creating a truly economic, scientifically organized and honestly conducted system in which the very best service could be rendered for a just fee, the payment of which is distributed over a long period, is not so difficult a problem as to defy solution. Because it is so obvious an economic necessity it will come

into being whether we will it or not. With us will rest the decision, in part at least, of what form it will take and whether we physicians work *with* the organization, or *for* it as employees.

But however much private initiative and management may accomplish, it is inconceivable that any system, based solely upon a private contractual relationship between physicians and patients, can ever meet all of the needs of our modern, complex living conditions. In the handling of communicable diseases, notably, where the interests of the well transcend those of the sick—so far, at least, as segregation and even early diagnosis is concerned—a system of private management alone must fail. Modern conceptions of effective methods of handling communicable diseases demand that physicians seek patients and control them rather than that they be sought on the patients' volition. So well has this been recognized in some communities that health officers have been granted more despotic power than any monarch holds. Thus, in New York City, the health commissioner has been intrusted with legislative, administrative and judicial functions notwithstanding the apprehensive provisions of the framers of our American Constitution that they be widely divided governmental functions. To the credit of various commissioners and of the general public, marvelous and encouraging respect and confidence are placed in the integrity and competence of the department which has led to its being supplied with ample financial support.

The pivot upon which the entire program of modern medical organization swings is negotiation. This is simple if the parties are well enough informed to understand one another. Information is spread by honest publicity. Here is another place in which we shall have occasion to revise our existing conceptions materially. To most of the better class physicians, the thought of personal publicity on a large and economical scale is abhorrent. This is due to their contempt for the methods of vainglorious quacks and near-quacks, resulting in a hypersensitiveness on the part of the more scrupulous practitioners which oftentimes makes it difficult for them to distinguish between the honest distribution of valuable and much needed information and giving out through direct and indirect channels, of lying, immodest and self-seeking advertisements. The line must be sharply drawn and followed courageously because there can

be no question but that too great retirement and extreme modesty on the part of the best men in the medical profession have given the pretenders their great opportunity. This is as true as it is that in religion and ethics, asceticism opens the door to the devil.

Personally, I should like very much to see many of the effective means of stimulating patronage now used by advertising quacks employed honestly by physicians in the interest both of themselves and of the employing public. When we have the means at hand for curing and preventing a large proportion of tuberculosis—of absolutely curing cancer through removing it in its early stages—of preventing the dreadful consequences of improperly treated syphilis and of mitigating many other diseases and conditions in which modern medicine is denied its great opportunity until too late, it is positively immoral to remain passive. I realize fully, how much more courage it takes to fly in the face of convention that to yield to the power of inertia, but, as I have suggested above, humanity is calling to the courageous and this is no time in which to maintain overnice attitudes which were assumed when conditions in the world were in no wise comparable to those of today.

The needs are now such that it is high time to break down the last of the barriers which separate physicians as a class apart from the general public. When established scientific fact superseded dogma and faith in the treatment of the sick, enlightened mankind turned from professors of creeds to possessors of knowledge. This removed any warrant for physicians to consider themselves or permit themselves to be considered as any longer a form of priestly caste. Medicine is establishing itself upon an increasingly impersonal basis. As time goes on and the public secures better standards by which to measure the ability of respective medical advisors, only the incompetent physicians will have anything to gain by partial retirement behind cloister walls.

The development of medicine both in its research and applied aspects, up to now, has been retarded by a too reserved attitude and suggestion of separateness on the part of medical men. It is only recently that the education of the majority of American physicians was secured in colleges which were financed and operated almost solely upon the capital and unpaid service of faculties to whom, for the most part, teaching was but an incident in

the day's work. Even now, the only medical library of any size in the state was gathered and is supported by a relatively small group of medical men. Nothing, so far as I am aware, has ever been directly contributed toward its maintenance by the non-medical public who, in the final analysis, have gained most through its establishment. The failure of the general public and of individual grateful patients to patronize medical education of one sort and another in this section of the country, has not been due, I am certain, to any unwillingness on their part, but merely because opportunities of doing so have not been presented to them in the proper manner. The patronage accorded to societies of musicians, historians, archaeologists, painters and many other organizations of scientists and artists offers good proof of this. What but our pride and characteristic self dependence has deterred us from going directly to the public and offering the great opportunity of making this society a far greater constructive force than it is in putting Wisconsin medicine upon as firm a footing as is Wisconsin agriculture, for example? True, a start in this direction has been made through University Medical Extension Education. But there will remain innumerable opportunities which only an organization controlled by a widely distributed and participating membership can develop fully. We need very much to take the public into partnership for the mutual advantages which would be gained through association, not the least of which would be opportunities for fostering better understanding that would inevitably lead, in turn, to increased respect and trust.

In the past few months, we have had occasion to deplore the lack of a better general understanding and appreciation of the position in which the war has placed the private practitioner of medicine. During this time your officers and many other physicians throughout the state have held conference after conference and spent many hours in studying possible plans of subsidizing some of our patriotic fellows who desired to serve the country as medical army officers but found it difficult or impossible to do so because the pay of an officer of the rank of medical man receives is not sufficient to meet the absolute necessities of mature professional men called suddenly from private, civil life. It was characteristic of us, as physicians, that our thought from first to last, almost, was given to

possible means of meeting the financial needs of these patriotic physicians out of self-imposed taxation or personal contributions instead of devising means of raising the pay sufficiently to meet the situation. Notwithstanding the fact that practically every other dealer in a commodity needed by the government in the prosecution of war, including organized labor, has been bargaining for increased rates which the general conditions in some instances seem to warrant, we, alone, perhaps, have been attempting to devise means by which the physicians who remain at home could carry the financial burden of their fellows who go to the front.

It must be obvious to anybody not blinded by self interest or self importance, that the rank, pay and authority conferred upon medical officers is so low as to be out of all proportion to the responsibility and importance of the well equipped medical man in modern warfare. And in the larger aspects of his work, in times of emergency, it is immaterial that he has not gone up through the ladder of officers' commissions, however important this may be to the officers of the line. Indeed, the physician who has had an extensive private and hospital experience is likely to be a far less embarrassed army surgeon in the face of actual war conditions than the one who has served a lifetime in a peaceful army post. And yet little consideration has been given to our difficulties because whatever discussion has been devoted to the subject has been confined to our own circles and we have not the power, alone, to alter the conditions.

We should have taken the public into our consultations as a part of our insistence that the government recognize the fact that the technical skill and knowledge which the private practitioner brings to the public service is in effect a commodity and that the medical man who cannot leave obligations at home without provisions for meeting them may not justly be treated as a slacker. We should have lost nothing in respect but gained immeasurably, thereby, had we presented our claim for special consideration forcibly. It would have been the surest means of arousing the law makers to a realization that modern warfare demands that physicians and sanitarians be given the authority and respect (which in army organization rests mainly upon the rank of the officer who would command it) to prevent the disease epidemics which in effect contribute so much to the fighting power of the enemy.

It is not clear that the heroic physicians who are making tremendous sacrifices to serve the nation under the conditions which obtain are adding particularly to the prestige of medicine. Indeed, the farmers who have increased the production of wheat, at what appears to be proportionately great profit to themselves, have received far more acclaim because the public has been shown through publicity and special price guaranty that the *value* of wheat is now double or triple its normal price. I would be among the last to advocate the exploitation of nation or public, as individuals, because we have a monopoly on what is in effect an indispensable munition of war. Demanding justice for the physicians' families, who at best must suffer great privation, is far different. Indeed it would appear that the larger patriotism demands a recognition of the fact that the interests of the nation would be advanced by raising the pay and position of special medical officers to an extent which would permit many men to enlist who are now absolutely prohibited from doing so by obligations, commendably assumed in peace times, which there is no honorable means of their discharging if they enter military service.

Had medical men been efficiently organized into unified groups before the war it would have been relatively easy to have readjusted the load so as to distribute the burden of military medical service in an equitable manner. Not the least of the advantages of combination and organization lies in this inherent ability to readjust the load so that each may help but no one need strain to the breaking point. We, like almost all other citizens of America, were not fully prepared to meet the demands of war because we were not fully prepared to meet the demands of peace.

But the adjustments are being made rapidly and competently. The tireless efforts of our secretary, combined with the patriotic spirit of Wisconsin physicians have resulted in an apparently very satisfactory number of voluntary enlistments by Wisconsin physicians in the army Medical Service. The examination of men conscripted for military service has also proceeded with praiseworthy despatch. This facility has been due in large measure to the fact that the examiners, in many instances, ignored the provisions for payment for services and contributed their time and skill freely to the public and at the neglect, temporarily, of the demands of their private patients. Nor has the

work been carried on merely with a view to meeting the immediate military demands.

What has been done in Milwaukee, at least, offers a well nigh perfect demonstration in line with all of the above more or less speculative discussion. What mere argument can rival in suggestiveness the fact that 124 cases of tuberculosis among the 251 suspects referred to the volunteer review board through the hearty co-operation of the official examiners, were discovered and registered; and that of the 124 cases, but 6 were previously known to the Milwaukee Health Department, notwithstanding its unusual interest and efficiency in ferreting out instances of the disease? By itself, this by-product of the official examinations constitutes a contribution of no mean value to the nation, the community and the individuals affected. But great as this is, it is overshadowed by its value as a demonstration of what might be done by an extension of similarly effective, and hence economical, service to other obscure diseases and to all classes of citizens.

It would be no difficult task for a representative of the medical profession to convince the non-medical public of the direct and far-reaching cash value of such work and that every spare hour of physicians' time should be thus employed upon a remunerative basis. Indeed, students of public, social and industrial problems are already asking why so obviously profitable an arrangement is not effected and placed upon a permanent foundation.

It remains for us of the medical profession to determine what form of answer is to be returned to that question and whether we shall promote or hinder the establishment of medical practice upon the level from which mankind can secure its full measure of freedom from premature death and avoidable suffering. To us in the new order, which the war is doing so much to bring into being, will be given the choice of leadership or of falling into step behind other leadership and following because we must.

To one who knows something of the history of medicine, of the spirit and idealism which characterize its practitioners and of the personal sacrifices being made every day by physicians in the interest of dependent patients, there can be no doubt as to what the answer will be or as to the manner in which the medical profession as a whole will rise to meet its full obligation.

But, as I have suggested repeatedly in the foregoing discussion, we alone, no matter how willing and well intentioned we may be, cannot proceed far without the hearty co-operation of the public. Patients must contribute something besides their fees to put the practice of medicine upon a truly scientific, economical basis. One thing—perhaps the chief thing—will be a small part of their sense of personal importance. This will be a very good thing for them because the physician's time is wasted and his perspective interfered with to an extent which mars the competency of his service when he is required to divide his attention between study of symptoms and signs and showing proper deference to the patient's social, financial or intellectual status. Nicholas Senn recognized this when he said on his death bed: "All I ask of my confreres in the medical profession is that I receive as good care and the benefit of as good judgment as is given a charity patient at the County Hospital—and I'm not getting it."

Every Liberty Bond bought brings us nearer peace.

BOMBARDMENT OF HOSPITALS.

For some time past the enemy has bombarded our hospitals incessantly. The hospital units at Dugny, Monthairons, Vadelaincourt and Belrupt, in the region of Verdun, have been subjected to several bombardments, during which forty-three nurses and soldiers have been killed, and fifty-five wounded. The bombardment of the hospital at Dugny began July 14, and was renewed July 22, and again August 3. From August 10 to 18, the bombardment took place every day, except August 15. August 18 it was particularly heavy. Trenches had been dug around the hospital, and afforded some protection against the enemy's attack. Mlle. de Baye, head nurse, was outside of the trench, caring for the safety of patients and superintending the personnel under her orders, when a shell burst, killing Mlle. Eugénie Pietrowska, Mes. Vostey and Fischot, and seriously wounded Mes. de Baye, Hartz, Leclerc, Leduc and Paque. August 20, an incendiary bomb was thrown from a German aeroplane, and struck the hospital of Vadelaincourt. The bomb penetrated a room for dressings, killing a nurse, Mlle. Vandamme. The barracks caught fire, and it spread to the neighboring buildings. The aviator threw a second bomb, which struck the operating pavilion in which three surgeons and their assistants were operating. The pavilion was entirely destroyed. Nurses and patients were driven from the hospital by the flames of the burning building. The aviator, flying very low, started in pursuit, firing his machine gun, and the result was sixty-eight victims, thirteen of whom have since died.—Paris Letter, J. A. M. A.

CORRECTIVE SURGERY OF THE ANTERIOR NARES.

BY W. E. GROVE, M. D.,

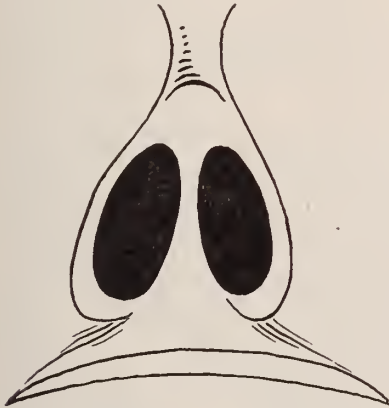
MILWAUKEE.

Obstruction to nasal breathing may, in general, be due to three main causes, which may be roughly classed as intra-nasal, retro-nasal and pre-nasal in character.

In the intra-nasal group belong the septal deflections, turbinate hypertrophies and hyperplasias, synechia and so forth.

The retro-nasal obstructions include such pathological conditions as adenoids, retro-nasal polyps and tumors, atresia of the choanae, etc.

What we may call pre-nasal obstruction to breathing is due to small anterior nares and these in turn are due to:



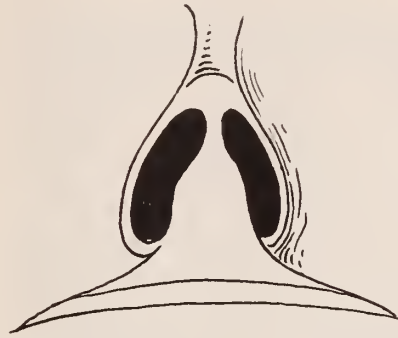
NORMAL NARES
FIG 1.

1. A collapsed condition of the alae.
2. A thickened membranous septum of the nose.
3. A subluxated cartilage or they may be due to a combination of two or all three of these factors.

In dealing with the condition of collapsed alae we must determine whether there is an actual collapse where the nares are small and narrow, where no thickening of the membranous septum, or subluxation of the cartilage exists and where the cartilaginous support of the alae is poor. In this condition we will get a sucking-in of the alae with every intake of air.

Or we may be dealing with a seeming or apparent collapse of the alae. This condition is bound to occur when the central portion of the nostril has

been sufficiently encroached upon by a thickened membranous septum or a subluxated cartilage or both. In this condition the collapse of the alae is



THICK MEMBRANOUS
SEPTUM.

FIG. 2.

not real or actual but is caused by the fact that the incoming air, impinging first upon the thickened membranous portion of the septum and then on that portion of the ala behind the great cartilage makes a ventil or valve action and automatically pulls the ala toward the septum and this will be especially true if the great alar cartilage is kinked toward the nares as sometimes occurs in these cases.

Our procedure for the correction of this obstruction to breathing will depend upon whether the collapse of the alae is real or only apparent.



COLLAPSE OF
ALAE

FIG. 3.

If the collapse is an actual one and no abnormality of the partition between the two nares exists then our point of surgical attack will be the ala itself.

But if the collapse is only apparent and is really dependent upon the increased width of the membranous septum, then we will do well to leave the



FIG. 4.

H. O. Before operation. Note the contracted left nares.

alae alone and turn our attention to the real offender, the membranous septum.

If the nares are normal, we can see by tilting up the tip of the nose, that the nostrils are almost perfect ovals with only a very slight encroachment of the posterior portion of the membranous septum upon the oval as in figure 1.

In cases with an abnormally thick membranous



FIG. 5.

H. O. After operation. Compare with Fig. 4.

septum the posterior inner margin of the oval is considerably encroached upon as in figure 2.

In true collapse of the alae, however, the inner margin of the oval is intact while the collapsed

wing folds in the outer margin of the oval as in figure 3. This is especially true during the act of inspiration.

Inasmuch as the great bulk of the cases of narrowed anterior nares are due to the condition of the membranous septum and not to the wings of the nose, I have been accustomed to attack this problem in the following manner. With a long very narrow-bladed knife by a horizontal incision directed backward from the tip, the entire membranous septum is cut loose from its attachment to the anterior edge of the quadrilangular cartilage from the tip of the nose to the anterior nasal spine.

Then picking up the inferior edge of this incision first on one side of the septum and then on the other with a fine mouse-toothed tissue forceps and everting it, the columnar cartilage of the membranous septum and as much of the subcutaneous



FIG. 6.

H. O. Before operation. Note the dependant septum and the lateral flare of nares.

tissue as one desires to remove, is carefully dissected out, great care being taken to avoid injuring the edges of the incision on each side.

When this has been done, the lower edge of the incision is picked up at a point corresponding to its greatest encroachment upon the oval of the nares. A triangular piece of skin is then removed by means of a very sharp knife, the obtuse angle of the triangle corresponding to the point grasped by the forceps. The size of this triangle of skin depends upon the amount of correction and narrowing of the membranous septum which is desired. The same thing is repeated at the lower edge of the incision on the other side of the septum.

Great care must be exercised not to remove more skin than is absolutely necessary otherwise the resulting scar contraction will lift the membranous septum too high.

The edges of the incision on both sides are then very carefully approximated and united by a row



FIG. 7.

H. O. After operation. Compare nares with that of Fig. 6.

of silk sutures, the line of the closed incision running as before from front to back.

When this has been done a heavy silk mattress suture is carried entirely through the posterior inferior portion of the membranous septum and tightly tied. Gauze plugs may be inserted under this suture on each side to prevent its cutting through.

The above operation, at the risk of being tedious, I have described very carefully and in detail because it constitutes the type operation whose details can be varied at will to suit each individual case.

For it is very rare, indeed, that one meets with simply a thickened membranous septum. This is usually complicated by a subluxated cartilage or a deviated septum or both.

When such is the case, we simply vary the type operation to meet the requirements of the pathological condition in hand. The initial incision is made as before. Then on the convex side of the septal deflection a muco-perichondrial flap is prepared back with its apex at the primary incision and its base lying somewhere farther back on the septum. This leaves the cartilage of the septum exposed over the area of the flap and down to its inferior edge.

Now by means of an incision through the cartilage beginning at the extreme tip and passing posterior to the subluxation, an incision which goes through the cartilage and just to the perichondrium of the other side, the subluxated cartilage may be shelled out from behind with great ease. Those who have removed a subluxated cartilage in this fashion find that it can be accomplished much more easily than in the usual manner of removing it from in front.

We still have the deviated septum to deal with. The cartilage incision for the purpose of performing the ordinary septum resection can now be made at any place desired on the exposed surface of the cartilage. However, care must be taken at this point to leave a sufficiently wide bridge of cartilage standing at the inferior edge of the quadrangular cartilage to insure the position and safety of the tip of the nose.

After the completion of the septum operation the mucoperichondrial flap originally prepared back is brought down and sutured to the inferior edge of the original plastic incision. Naturally, however, whatever plastic work is necessary on the membranous septum is done before this last suture is laid.

The typical operation described above may be adapted for an entirely different purpose and that is the raising or elevating of an abnormally low



FIG. 8.

Before operation. Note contraction of the right nares.

and pendulous membranous septum. We not infrequently encounter people in whom one can look directly into the nostril when the face is viewed from profile, and such a condition is quite annoying. It can very easily be remedied by making

the initial incision as described and then trimming away as much of the anterior inferior edge of the quadrilangular cartilage as is desired. Or if this pendulous condition be due to an excess of soft subcutaneous tissue this can be dissected out. By then removing appropriate triangles from the inferior skin edge of the incision and at times even from its superior edge, and stitching the membranous septum back to its moorings any desired effect can be obtained.

Another problem which can be attacked by the above described operation is that of a slightly prominent and projecting nasal tip, but only in cases where such prominence is due to an exuberance of the soft tissues of the tip and not to abnormalities in the external frame work of the nose. In such a case, after the necessary dissection of the



FIG. 9.
After operation. Compare with Fig. 8.

soft parts, the triangles removed from the edges of the incision will be much thicker than those described above and the stitches will be placed in such a manner that the incision when closed will run vertically instead of horizontally.

We have assumed in the above discussion, that the cause of the obstruction in the anterior portion of the nose lay in the abnormality of the septum or some part of it. This may not be the case at all. We may be dealing with a true collapse of the alae and the membranous septum may be in normal condition. In this case the point of attack will be the alae themselves.

An elliptical incision through the skin and great alar cartilage and in a general antero-posterior direction will be made. The piece of cartilage thus

included can be dissected free and removed. The edges of the skin surrounding the ellipse can then be sutured, this having the general effect of buckling the alar cartilage outward.

Only one word of caution to anyone desiring to make use of this plastic operation. Great care must be exercised in the removal of any tissue so that not more is taken away than is absolutely necessary, for if this is done the resulting contractures of scar tissue will surely deform the nose and lead to unpleasant consequences.

In conclusion, I desire to acknowledge my indebtedness to Dr. Max Halle of Berlin, in whose clinic and by whose kindness I was first permitted to see the various steps of this operative procedure performed.

Don't forget the Liberty Bonds. Buy now.

OCCUPATIONAL CENSUS OF THE ARMY.

The War Department has authorized the following statement:

There is now being made under the direction of the Adjutant General a comprehensive occupational and educational census of the men of the National Army.

The object is to carry the selective service law to its logical conclusion and to increase the efficiency of the army by putting the right man in the right place.

With this in view, a personnel organization has been established in each of the 16 cantonments. The previous occupation, education and preference for service of every man are recorded on individual cards, which are then filed and analyzed at the divisional personnel office in each cantonment. An analysis as to the entire 687,000 men of the first increment can readily be made from these records.

In this work the War Department is having the assistance of a body of civilian experts organized under the name "Committee on classification of personnel in the Army" and including a number of professional employment managers loaned to the government by large industrial and business concerns. The data collected will be used within the divisional organizations to assist division commanders in making the best possible assignment of their men. It will also be of importance in locating men fitted for special branches of the service, such as Aviation, the Ordnance Corps, etc., for which it may be necessary to assign men from the cantonments.

It must not be assumed that men can continue their old occupations in the army. The function of an army is to fight and most of the men irrespective of previous occupations, will be in the infantry and artillery. Nevertheless, the specialization of modern war requires large numbers of skilled men adapted for technical units and special branches of the service. The locating and placing of such men to the best advantage is of vital importance. —*Science.*

EAR AFFECTIONS AND DIABETES.*

BY C. ZIMMERMANN, M. D., F. A. C. S.,

MILWAUKEE.

Although we do not know of any ear disease peculiar to diabetes, there is no doubt that diabetes has an unfavorable influence on the course and healing of ear affections, imparting to them a certain anatomical and clinical character, and, especially with regard to operative measures, its presence demands the most serious consideration. On the other hand, ear diseases may elicit the chief symptom of diabetes, viz., glycosuria.

To begin with affections of the *external ear*, obstinate eczema of the auricle and the external meatus with annoying pruritus has been observed. This is in accordance with the skin affections on other parts of the body in diabetes. More severe are furuncles of the external meatus, which often heal very slowly, even after incision, and according to Wolf have a great tendency to relapses or may lead to coma.

Miot states that diabetics suffer at times from ear troubles of varying intensity and duration, which are caused by swelling of the Eustachian tube. Some of the cases are curable, in the others the tubes are permanently obstructed and impermeable for air or bougies. The constant current allays the congestion of the mucous membrane, and renders possible the introduction of bougies and the application of chemical and galvanic cauteries. Valentin reported that in diabetes *oidium albicans* may enter the Eustachian tube from the nasopharynx to the tympanic cavity and produce otitis media with perforation of the drum.

Of all ear affections in diabetes purulent otitis media has been observed most frequently. According to Koerner's statistics, and to a critical analysis of 46 cases by Eulenstein, diabetic persons have a greater tendency to suppurations of the ear and temporal bone than non-diabetics, and acute otitis media in diabetics leads much more frequently to diseases of the bone, to extensive caries and necrosis, than in non-diabetics.

Although the opinion formerly held of a specific diabetic otitis has been refuted as erroneous, it

is certain that the greater vulnerability of the tissues of the body in diabetes predisposes to the occurrence of acute otitis media and retards the healing process, so that the affection is apt to become chronic.

This predisposition in diabetes is given by the presence of sugar in the blood and tissues, furnishing a very good culture soil for microbes. It is well known from experimental bacteriology that animals that are ordinarily proof against certain microbes can be successfully inoculated with these after grape sugar has been introduced into the body and an artificial diabetes produced. Thus Bujwid created local gangrene of the skin of animals by injecting very slight, in themselves harmless, quantities of staphylococcus aureus under the skin and simultaneously grape sugar into the auricular vein. Likewise von Mering and Minkowski observed that their glycemic dogs after extirpation of the pancreas inclined to suppurative processes and with one exception never showed aseptic healing. Also Ernst proved clinically and experimentally that diabetes creates a disposition and favorable soil for the growth of the most different lower fungi. Hence, one must assume that the cells of the tissues must be changed by the sugar, so that they do not offer sufficient resistance to morbid agents.

This is further due to lack of nutrition from early arteriosclerosis in diabetes, as first pointed out by Israel. Also Partsch found in diabetes endarteritis of the smaller arteries with diminution of the lumen, calcification and even ossification of the media, which play an important rôle in the etiology of spontaneous diabetic gangrene. According to the histological investigations of Hildebrandt, diabetes leads early to degeneration of the contractile vascular walls, secondarily to a proliferation of connective tissues. Clinically he proved this by examination with Roentgen rays. His skiagraphs showed intense sclerosis of the arteries and veins. Intestinal hemorrhages, extravasation in skin and mucous membranes, e. g. of the mouth, epistaxis, hemorrhagic otitis media, subcortical hemorrhages, described by a number of authors find their explanation in these vascular alterations. Hence Garel and Armand who reported 13 cases of epistaxis in diabetes, recommend the examination of the urine in frequent relapses of epistaxis.

The occasional fatal character of acute otitis

*Abbreviated from a paper read at the Second Annual State Meeting of the Wisconsin Eye, Ear, Nose and Throat Specialists, October 8th, 1915.

media in diabetes is illustrated by cases of Chorażycki and Heiman.

The following cases of acute otitis media and acute exacerbations of chronic purulent otitis media in diabetes took a favorable course, not much deviating from the ordinary form:

CASE 1. March 12, 1912, I saw in consultation a feeble man, aged 65, who had been afflicted with diabetes for years, on account of intense pain in his left ear for two days from otitis media. There was a slight discharge and the meatus was very much swollen. A large paracentesis relieved him at once and he made a good recovery.

CASE 2. On Dec. 31, 1892, I was called to a man, aged 50, diabetic for years. He was in bed after an operation for empyema of the pleural cavity and now complained of pain and discharge in left ear. Large perforation in anterior quadrant and very offensive secretion. Under treatment the discharge stopped Feb. 17, 1899. March 15, 1899, ear ran again after a severe cold, again on June 6, 1899, which soon healed. The patient died a few years later.

CASE 3. H. B. aged 52, diabetic, who had since childhood a discharge from his right ear, came on July 28, 1914, on account of pain and recent profuse suppuration of this ear. There was a small perforation in anterior portion of the drum, the posterior portion was bulged forward and the mastoid process was very tender, temperature 99°. Apparently the posterior portion of the tympanic cavity was shut off by adhesions. I therefore made a large curved incision in the posterior portion of the drum and up to the perforation which at once relieved him. The pain in the mastoid subsided and after a few weeks the discharge from the ear ceased.

According to Koerner, adults, especially men, suffering from diabetes, do not easily recover from an acute otitis media without severe, very rapidly spreading, mastoiditis. It is characterized by extensive central destruction of bone in the mastoid process, before signs, tenderness to the touch or swelling, show on the outer surface. Apparently it commences by hematogenous infection of the bone, extends early to the pneumatic cavities and discharges its pus on the preformed path through the tympanic cavity and at first has the aspect of mere suppuration of the middle ear. The mastoid may be converted into a large cavity, filled with granulations and pus, covered by a very thin corticalis, and the operation reveals the inner table of the sigmoid sulcus or the middle cranial fossa destroyed in a large extent. In these cases a valuable diagnostic means of recognizing the serious condition is percussion of the bone, originally devised by Lücke and further developed by Koer-

ner. From the experience of Lucae's clinic Grossmann reports that out of the cases of acute otitis media which came to operation 72.7% occurred in diabetic, 56.3% in non-diabetic, patients, due to the alteration of the tissues by diabetes, as set forth above.

All microorganisms that cause otitis media were found in diabetic mastoiditis, viz., streptococcus, staphylococcus albus, and diplococcus, which seems to have a greater tendency to spread beyond its original field of infection, and mixed infections. As further complications have been observed: necrosis with formation of sequestra, propagation of the suppuration to the dura (Bezold), thrombosis of the sinus, brain abscess, periarticular abscess of the maxillary joint, paralysis of the abducens and the facial nerves.

Affections of the inner ear in diabetes have been considered rare. They occur in form of vertigo, tinnitus, and progressive hardness of hearing. In some cases the labyrinthine symptoms probably may be due to neuritis of the auditory nerve, an assumption which is admissible if we remember the not rare occurrence of neuritis and atrophy of other nerves in diabetes, e. g., the optic nerve, the sciatic, anesthesiæ and paresthesiæ and neuralgiæ, e. g., of the mastoid. This has been corroborated by the anatomical investigations of Steinbrügge, who found in a diabetic individual a hemorrhagic otitis media with microscopically visible extravasations of blood in the labyrinth, at the periosteum of the internal meatus, between the fibres of the auditory nerve and its branches, in the spiral ligament, the endosteum of the vestibulum and on the neuro-epithelium of the ampullæ. According to the conclusions of Friedrich, based on the large material of the ear clinics of Halle and Kiel, there is about 1 case of suppuration of the labyrinth to every 100 cases of suppuration of the middle ear. Bezold, however, regards chronic general diseases diabetes, as well as tuberculosis and lues, as the chief etiological factors in the proneness of suppuration of the middle ear to advance to the spaces of the labyrinth. This is not surprising if we consider the tendency of otitis media in diabetes to caries and necrosis mentioned above. The following case may illustrate this:

CASE 4. A sickly looking man, aged 30, came to me on April 1, 1898, on account of his hearing rapidly failing within the last three weeks. Right ear was totally deaf. Left ear almost deaf, showed chronic purulent otitis media with very offensive discharge. A broad

polypus at the medial wall was removed with curette and the root cauterized with nitrate of silver. The bone was carious in a large extent. The next day his deafness had increased, and there was some dizziness, but no pain or headache.

The parents had noticed the deafness in his third year. Ten years ago he acquired syphilis with secondary symptoms on skin, mouth, tongue and throat.

On April 6, the patient stated that he had diabetes and showed me a certificate of an examination of the urine, made on January 15, by a chemist in New York who found 7% sugar. Now the amount was the same. VR-o, traumatic cataract from an injury 20 years ago. VL, 15/70. Myopic Astigmatism, with his glasses 15/50. The sight of this eye was failing for about a year. The condition remained the same the following few days. On April 7 he complained of pain in mastoid without visible signs. The patient then went to New York, and, as I heard later, died on April 20, but I could not find out under which symptoms.

The occurrence of labyrinthine symptoms in this case after the operation, and in another one after the removal of a large polypus of the inner wall of the tympanic cavity with the snare, without injuring the bone, seems to me due to the fact that the fistula in the carious bone was stopped by the polypus, so that lymph could not, or very scantily, escape. After removal of the polypus the stoppage apparently ceased and the labyrinthine symptoms set in. I found a similar explanation in a case of acute purulent otitis media in a diabetic reported by Ephraim in whom the mastoid operation disclosed a fine fistula in the medial wall of the antrum leading to a fistula in the horizontal semicircular canal from which lymph oozed slowly. There were no labyrinthine symptoms. Ephraim attributes this, as also Lucae pointed out, to the slight and very gradual efflux of lymph fluid, as it is very frequent in carious, in comparison to traumatic, defects.

With regard to the prognosis of the operation of mastoiditis in diabetic persons a perusal of the otological literature shows discrepant views. While some, mostly older authors, consider it contraindicated, others advise not to operate early, the majority, especially recent authors, considers the operation as a vital indication. The subject has been repeatedly discussed, e. g. before the Otologic Section of the New York Academy of Medicine, the Otological Society of New York, the Otological Society of Paris, etc. To mention only a few. Richards operated on 9 cases, of which 6 died of coma, McKernon 13, all in chloroform-narcosis, 4 died, Dench 3, 1 died. Koerner discussed the

operative results on 33 cases, discriminating between mild, medium, and severe, cases of diabetes. None of the light form died, the wounds healed more slowly than in non-diabetic patients, but none developed the severe type after the operation. Also all of the medium kind were cured. Out of the 9 individuals suffering from the severe form of diabetes, 3 died from coma, one from general weakness. All were operated upon in chloroform narcosis. In the mild forms K. considers the prognosis good and the operation also permissible in the severe forms, if there is a vital indication. If, however, the urine shows ferric chloride reaction, the surgeon must not conceal the possibility that the necessary operation may bring on the threatening coma.

For illustration I may here report the following case:

CASE 5. Mrs. F. D., aged 48, came to me in January, 1909, with the history that her left ear had been discharging for about three months. For the last few nights she could not sleep on account of severe pain in ear and head. The left side of the head, temple and mastoid region were intensely swollen and the auricle was standing off. The walls of the left external meatus were very much swollen making the otoscopic examination difficult, pus was oozing out, and in the depth there was lively pulsation. As the patient suffered from intense pain she was at once sent to the hospital, where an hour later I opened the mastoid. After the incision pus oozed. The external surface of the mastoid was discolored to a large extent. After its removal an immense cavity was laid open, filled with granulations. At 4 P. M., temp. 99°, pulse 130. The next morning temp. 98, pulse still 130. The patient felt greatly relieved and no pain whatever, but from her laborious breathing I suspected imminent diabetic coma, and asked for the report of the urinary examination. This had been omitted in the rush of getting her ready for immediate operation. The test now revealed abundant sugar. Upon inquiry her physician, who had assisted at the operation, but had not mentioned anything of diabetes, told me now that she had it for three years. Bicarbonate of soda, 2.00, every hour, milk and oatmeal, and injections of salt solution, were ordered. On the 2nd morning the wound was dressed and found in excellent condition. The patient was conscious and felt comfortable, but the breathing was more laborious. At 6 P. M. the coma was fully developed, the patient was unconscious, and died at 8 P. M.

If I had known beforehand that the patient had diabetes, I would have advised the operation, which was absolutely necessary, but would have guarded the prognosis and mentioned to the relatives the possibility of coma.

If we consult the modern opinions of internists

and surgeons as to surgical procedures in diabetes I cannot do better than to quote from the views, based on unusually large experience, of Kraus, Naunyn, von Noorden, Minkowski, and the surgeons Payr and Karewski, propounded in the common meeting of the Societies of Surgery and Internal Medicine at Berlin. Every patient, submitting to surgical treatment must be carefully examined for diabetes. The unfavorable influence of surgical interference may be caused by the psychological shock and the effects of the traumatism on the nervous system, the deleterious influence of the narcotics on the organs participating in the metabolism of the carbohydrates and the acidosis bodies, loss of blood, disturbances of taking nourishment, respiration and circulation, etc. The consequences may be increase of the intensity of diabetes, as shown by the increase of glycosuria observed after mastoid operations, acidosis, acceleration of general weakness and heart failure. The diabetic patient in need of surgical aid is threatened by 2 dangers; augmented violence of all kinds of septic processes and the greater predisposition to coma. The first danger can be met by strict asepsis under which wound healing takes place in diabetes of any form without disturbances, under avoidance of all toxic antiseptics, by adopting the most simple and rapid methods of operation guarding against injuring the tissues by infiltration anesthesia, caustics, etc. Infectious processes, however, take a malignant course and increase the dangers of the metabolic disease.

Every form of diabetes requires careful consideration according to the strictest principles of internal medicine before, during, and after, operation. These consist in previous dietetic treatment aiming at reducing the hyperglycemia, prevention of acidosis, preservation of the strength of the patient, and in proper cases abundant ingestion of alkalis for neutralization of the abnormal acids. Here the starvation treatment, devised by Frederick Allen, must be considered, which is simple, safe, and very efficacious in rendering and keeping a patient sugar free in a much shorter time than it was possible by the old methods.

Coma is the most dreaded enemy of our therapeutic efforts. Neither the light form of diabetes, nor its successful preparatory treatment insure against coma after operations, which under all circumstances have the significance of a damaging

factor, be they ever so slight, as I observed in the following case:

CASE 6. G. S., a stout, healthy looking girl, aged 19, came to me on August 17, 1903, being blind in both eyes. The strong acetone smell of her breath at once suggested the diagnosis of diabetes, which was verified by the large amount of sugar in her urine. She weighed 117½ lbs., suffered from thirst and voracious appetite. Both eyes showed total diabetic cataract. To prepare her for operation anti-diabetic diet was ordered. When she returned on Sept. 7, the quantity of urine, which had a strong smell of acetone, in 24 hours was still 10 quarts. On Sept. 8 a dissection of the anterior capsule of right lens was made in cocaine anesthesia. The eye bore this very well, but on Sept. 12, A. M., she had 101.6°, dyspnoea, pulse 96, and headache, forboding diabetic coma. P. M., temp. 102, pulse 120°. The ferric chloride test revealed diacetic acid in the urine. Large doses of bicarbonate of soda were given every hour. Sept. 13 the patient was still conscious, but collapsed and cyanotic, pulse more rapid, less tension. The parents, who were sent for, took her home, where she died on Sept. 14.

Hirschberg had a similar experience.

Post-operative coma may set in after any kind of narcosis and anesthesia, but especially after chloroform. Chloroform is apt to produce greater acetoneuria than ether. Hence Kausch principally denounces chloroform and considers ether as the narcotic for diabetics. The inhalation narcosis ought to be instituted in the early morning, in order not to prolong unnecessarily the time of the longest physiological abstinence from food.

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Every Liberty Bond bought brings us nearer peace.

HOW CATO TREATED DISLOCATIONS AND FRACTURES.

DE RE RUSTICA. CAP. 161.

Should there be a dislocation, by this song it may be cured. Take reeds IV or V feet long, cut them in half and apply them while the limb is held by two men, and while doing this the injured man shall sing these words:

"Motas vaeta daries, dadaries astaries: dic una pares," until the parts are in place. An iron is to be bound over them where they come together end to end, if there is a fracture until the bones are joined, one end to the other, and the patient should sing every day either this song that follows, "Huat hanat huat, ista pista sista, domiabo dannaustra," or the following, "Huat huat huat, istar sis tar sis ardannabon dannaustra."

A learned commentator has said that Cato knew better; and this singing was not for wise men to do, but only for the ignorant; to keep their minds occupied with hope.

POLIOMYELITIS.

Since September 10, cases of poliomyelitis have been reported in the press from the following places: Chicago, September 21, there had been 142 cases, with 2 deaths; September 11, 3 cases and 3 deaths were reported from Rock Island; the state board of health at Des Moines,

September 18, had received reports of 43 cases throughout the state, 19 of which had occurred at Davenport and vicinity, where the disease was epidemic. Other towns and counties in the state reporting cases were Deep Creek, Clinton County, Lynn, Plymouth, Fayette and Monona Counties; Castana reported 3 deaths, with 1 case under quarantine; Knoxville, Marion County, reported several cases in the county; Schleswig had 1 case, September 15; Waterloo had 1 death, September 16; Kansas City, Mo., September 14, had 3 cases; September 15, Montana reported no cases since August 18. In Nebraska, September 14, 5 suspected cases had been reported to the state health authorities from Hebron, 2 from Dawson, 1 from Schuyler and 1 from Johnson; at Omaha there had been but few cases, and no alarm was felt. In New York City names and address of infantile paralysis patients are published so that parents may protect their children. The plan has worked well, it is said. Pennsylvania reported 1 case from Waynesboro, September 12, and 1 from Mahanoy City, September 14. There had been 107 cases in the state during August.—*J. A. M. A.*

PSYCHOLOGICAL EXAMINATION OF RECRUITS.

Appointments for psychological examiners in the National Army Cantonments, Camp Lee, Petersburg, Va.; Camp Dix, Wrightstown, N. J.; Camp Devens, Ayer, Mass.; Camp Taylor, Louisville, Ky., have been made as follows:

Major, Robert M. Yerkes, Surgeon General's Office, in charge of psychological work. Lieutenant Arthur S. Otis in charge of statistical work in the Surgeon General's Office, Section of Psychology.

Lieutenants Clarence S. Yoakum, Marion R. Trabue, Jos. W. Hayes, and Wm. S. Foster to serve as chief psychological examiners.

Lieutenants Geo. O. Ferguson, Jr., Walter S. Hunter, Edw. S. Jones, Karl T. Waugh, Heber B. Cummings, Edgar A. Doll, John T. Metcalf, Herschel T. Manuel, Carl C. Brigham, John E. Anderson, Horace B. English and Harold A. Richmond to serve as psychological examiners.

In addition to the above commissioned examiners, the following have been given civil appointment for psychological examining: Doctors Leo J. Brueckner, Donald G. Paterson, A. S. Edwards, Rudolph Pintner, Benj. F. Pittenger, Ben. D. Wood, John W. Bridges, J. Crosby Chapman, John K. Norton, Edward C. Rowe, J. David Houser, C. P. Stone, Thos. H. Haines, Norbert J. Melville, H. P. Shumway, Chas. H. Toll, Thos. M. Stokes, C. C. Stech, John J. B. Morgan, Raymond H. Wheeler, Harold C. Bingham, Carl R. Brown, Chester E. Kellogg, Ralph S. Roberts, and D. L. Hoppinginer.—*Science*.

They that use to have received pills made of aloes de succo citrino, made in powder (which is to be had at the apothecaries), and mix with the juice of coleworts, of the bigness of a bean, shall never be troubled with pains in the head.

THE WISCONSIN MEDICAL JOURNAL

OFFICIAL PUBLICATION OF THE STATE MEDICAL SOCIETY OF WISCONSIN

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Annual Subscription - - - Two Dollars Single Copies - - - Twenty-five Cents

Address all business communications to THE WISCONSIN MEDICAL JOURNAL, 504 Goldsmith Building, Milwaukee

Vol. XVI.

October, 1917

-No. 5

EDITORIALS

ARE YOU THE MAN?

IT seems evident to the attentive observer in these trying times that men have not yet grasped the full significance of our country's action in declaring war on Germany. There are still those who are in doubt as to the reasons which led congress to take such a drastic step. Far out here, well protected in the center of our great land we do not realize that we are at war with the most brutal, most ruthless, best equipped military power in the world. It is time we woke up from our trance and considered what part everyone of us must play. For win we must, else we degrade to a mass of peons lorded over by a tyrant class.

Our country is calling, yes, begging, for physicians to care for the mighty army which even now is being raised. Who should go with the troops and who should stay with the civil population, for both must be cared for. Obviously, some cannot go. They are too old, they are physically incapacitated for military service, or their going would place their families in such a state of financial embarrassment that the family would actually suffer. Then there are a few in Public Health work who should not go and a few who are absolutely essential to the teaching force of medical schools. Also there are a few who by their peculiar fitness for home organization should do their part at home. Possibly there are a very few more who for most valid and excellent reasons had best do their work where they are.

Who are left? Manifestly *nearly* all of the graduates of three years ago, *very many* of five years ago, and *many* of ten years ago. Some who have families but who have laid away a competence can also go. There are others besides these groups. Now, doctors, how does it strike you? To which class do you belong? Are you afraid to sacrifice a little business at this time? Is your conscience quite clear that you are more needed at home than in the army? Are you quite sure of it? Can you go among your friends with your head high in the knowledge that everyone knows you are doing your full duty? These are searching questions, but so are these terrible times. Choose ye now. He that can possibly go should make haste to enlist. Doctors cannot be conscripted we are informed on good authority. Ask yourself not, "If I do go, will I lose money by enlisting," but, "How can I arrange my affairs so that I may go?" Your country needs you, is calling you. Are you the man?

**Have you bought your Liberty Bonds?
Do it now!!**

HEALTH CONSERVATION.

WE are in receipt of a circular signed by five medical directors of Life Insurance Companies in Wisconsin urging a free examination to any life insurance applicant during a period of two years following the issuance of a policy. It is stated in the circular that "The Companies allow a liberal fee for the examination

of applicants for life insurance with the certainty of payment; *compared with other service it is an extremely fair compensation for the time employed* (italics ours) and when you consider the possibilities of bringing home to each individual the value of a periodical examination, with its resultant increase in clients and income to you, we feel that your co-operation in this movement will prove a profitable investment in addition to doing a great amount of real good."

Here is the free examination ticket:

HEALTH CONSERVATION COUPON.

This Coupon entitles.....
to a consultation and examination of his physical condition by the undersigned—without cost—at any time within two years from the date hereof and is issued in conformity with the Health Conservation Movement of the Life Convention of Wisconsin.

No report of the results of such physical examination will be made to any Company or person other than to the person examined, and the only purpose of issuing this Coupon is to encourage periodical examination to safeguard against physical impairment and permit timely attention to any physical defect.

Date....., 19.. ..M. D.

For many years past we have persistently and consistently preached the value of prophylactic examinations so that on principle we are heartily in favor of it. However, the scheme presented by the gentlemen constituting the Life Convention of Wisconsin savors too much of a further attempt to gain free examinations for the benefit of the Insurance Companies. To say the Companies pay a liberal fee, is absurd. It is liberal for the fellow who feels a pulse, looks at a tongue and holds urine before the light and guesses at it. It could certainly not be called liberal when a real examination is made in a proper manner. Then for the liberal fee, the examiners are to make another examination free because—well, because we doctors are still the easiest meat for all to feed upon. We happen to know what it means to make a thorough examination. It is a tedious process requiring some skill in interpretation of findings. But we are told that a liberal fee of five dollars will more than cover the original examination so that we figure that 60% for the first, 40% for the second is meant.

We cannot see why we doctors should give our services to people well able to pay for them. God knows, we are never chary and stingy of our time or our money. Then why saddle this last burden on us? Ah, we read further that it is good advertising, we do a lot of work free and we get patients coming in droves. Well, that argument might appeal to some but it falls flat elsewhere.

We do not believe that any such scheme will find favor in the eyes of the conscientious doctor, the man who *knows* that a cursory superficial examination can tell him nothing of value. When men are found to do slovenly work, the fee is too large. For those doing their honest best it is almost insulting to offer to use them and their talents in a propaganda which in principle is splendid but which is coyly exploiting the doctor by holding out the bait of increased practice and income. To us it seems only too clear that this is one more scheme for getting something for nothing by using the great subject of prevention of disease as a hook to catch the unwary.

Now, we are fully in sympathy with the "frequent examination" movement, let that be understood. We simply highly disapprove of the method as outlined in the circular before us.

Don't forget the Liberty Bonds. Buy now.

COMMON COLDS.

THE very name connotes the contempt with which people view the all too frequent infections of the upper respiratory tract. Every year hundreds of thousands of the population are attacked, at times the affection spreading from person to person like fire in dry grass, again being confined to one person in a household. The term "cold" covers a number of different infections all having one common denominator, the attack on the nasal, pharyngeal, laryngeal and bronchial mucous membranes.

To catch a cold conveys the idea that one was chilled and yet this is far from being the case. Some people live in atmospheres so dry that the nasal mucous membrane ceases to act as the barrier it usually is. Its normal mucous secretion becomes dried up with the consequent liability to attack by some stray bacterium. Or bacteria already present find a chance to multiply and a cold results.

We speak of influenzal colds. We think we have the trouble nailed when we give it a name. We simply use a term to cover our ignorance of the real cause. A great variety of organisms have been credited with the responsibility for producing colds. Among them are, streptococci, pneumococci, micrococcus catarrhalis, bacillus influenzae. Some, all, or none may be the cause. However, a cold may be a serious matter. It always produces some effect on its possessor. It may only be a slowing of his usual mental or bodily activity, or it may develop into pneumonia, or it may be the very last straw which breaks a resistance to tuberculosis.

That colds are usually highly infectious is common knowledge. "It is an obligation on the part of persons having colds to see to it that they do not spread these colds to somebody else. The person who neglects to cover his nose and mouth when he sneezes and coughs, the careless spitter, the person who permits his germ-laden discharges to contaminate things which are going to be handled by other people is a menace to the community. If such a person uses public swimming pools, if he is not amenable to reason and persists in distributing his infection, he should be avoided as a spreader of pestilence."

And when you are sitting on a street car and a fellow behind you coughs in your neck so that you can feel the spray, you should be able to have him fined in court as a menace to health. But you do not even gently argue with him that possibly he might use his handkerchief, or offer him yours if he hasn't any.

We fellows, we doctors, should pay more attention to the prophylaxis of colds. We should lead the crusade against the spreader of infection just as we have led the crusade against tuberculosis. We are welching if we do not do our part in protecting the public. It can be done. Education has accomplished many unbelievable things. It is just as good a weapon in this case.

QUACKERY EXPOSED.

THE JOURNAL has recently received a most important and instructive booklet entitled "Medical Institutes" issued by the Propaganda Department of the A. M. A. The perusal of this pamphlet leaves one overwhelmed at the cupidity, rapacity, and utter lack of the milk of

human kindness exhibited by the harpies who prey upon the afflictions of their fellow beings.

Once in a while we are asked where does all the money go which is paid into the A. M. A. Here is one answer. Moreover it alone is worth all the money which the members contribute to the Association. The Propaganda Department is doing a splendid work. It would be futile to deny that it has had great influence in arousing the public to the base evils of the sharks and quacks. There is a decrease in lewd advertisements, an almost complete absence of the suggestive sexual advertisements in the daily papers. The consciences of all newspaper owners are not yet clean but some, thank heaven, are. More than one Milwaukee daily which boasts of its respectability carries most questionable medical advertisements. Verily, the editorial right hand does not wish to know what the managerial left hand doeth. Some day both hands will be out in the open and then the quacks will have hard sledding. Without the collusion of the daily or weekly papers in their nefarious business they could not exist.

We recommend to every doctor who reads this that he write for one of these books and put it on his waiting-room table. If every doctor did this, and kept his table always supplied (only winking slyly to himself when a patient surreptitiously removed one for further quiet study) it would help, oh so much, to spread the propaganda and hasten the day of the final demise of advertising quackery.

Every Liberty Bond bought brings us nearer peace.

THE ANNUAL MEETING.

WE feel perfectly safe in saying that no physician who attended the Annual Meeting felt that he was not well repaid for his time. In spite of the present conditions, the absence of many men in the Government service, and the consequent necessity of others remaining at home, the registration exceeded the expectation of the most optimistic official. This was the first year that the Society attempted the Section work. We took particular pains to find out the opinion of members in regard to the innovation, and we failed to find anyone who really

wanted to return to the old order. Criticism there was, naturally, but it was not so adverse as to make the Society wish to give it up yet. The increase in the number of papers which can be presented is one great advantage. Occasionally two papers were presented at the same hour in two sections, both of which some members wanted to hear. This is unavoidable. The papers will be published in the JOURNAL and all will have opportunity to read them.

Several significant facts were obvious. In the first place only one paper was missed. The author was present, but unforeseen circumstances prevented the completion of his paper for presentation. Again, we never recall seeing such interested attendance. In former years the commercial exhibits were always crowded even while the sessions were being held. This year the men attended the sessions. We understand that some exhibitors grumbled. Accustomed to be the chief attraction they could not understand the apparent slight put upon them. We feel that this is a tribute to the awakening earnestness of the profession. After all the scientific sessions are the important matters. This year they were really the first choice.

There were some splendid papers. The addresses in Medicine and Surgery were particularly interesting and timely. The high point, however, was attained in the truly masterly address of Dr. John W. Nuzum who told of his work on Poliomyelitis. This paper was scheduled for the Medical Section but was wisely transferred to the general meeting so that all could have the opportunity of hearing it.

Still another feature which struck us favorably was the adequate time for full discussion of papers. This was made possible by the Section work. There were fewer papers and therefore more time for every one. This feature was most favorably commented upon. There was a large attendance at the banquet and while we will frankly admit that it was not up to the Madison entertainment, it was nevertheless enjoyable. We do like to see ladies present. We hope this feature has come to stay.

The new spirit evident at this meeting, making it a landmark in the history of the Society, was shown by the presence of about one hundred and fifty men at Muirdale on Friday afternoon. Bear in mind that Muirdale, the County Tuberculosis Sanatorium, is eight miles from the center of the city and over a mile from the end of a car line. The weather was stormy, every adverse condition

seemed present. Yet one hundred and fifty men went out to hear the papers at the last session.

Fellows, we ought to be proud of ourselves. We have a right to be. We made this meeting the high-water mark for Wisconsin Medicine. Let us not rest satisfied with this good work, let us not get too conceited about ourselves. Rather let this be a tremendous stimulus to all of us to pull together and make next year's meeting a greater success than this one.

Don't forget the Liberty Bonds. Buy now.

CORRESPONDENCE

To Physicians and Surgeons in Industrial Practice.

Dear Doctor: I find your name in the index to the American First-Aid-Conference, which indicates that we have had some correspondence in regard to problems of first aid in industries.

Major Edgar King, Medical Corps, U. S. A., has been placed in charge of the problem of reconstruction and re-education of U. S. soldiers who may be crippled in the present war.

If your relation to the industries in this country has given you any experience in this problem of vocational re-education and of finding new employment for the re-educated, handicapped industrial worker, please let me know.

Please send me the names and addresses of any medical or non-medical men and women who have had experience in this educational problem. I am anxious to be helpful to Major King in this line.

This problem of reconstruction and re-education of the wounded in this war will be one of the largest to be met by the Government, and everyone who has had any special training or experience with such work should send his credentials to the Surgeon General's Office and offer his services, if he can be spared from his special duties to his community.

The Medical Reserve Corps of the Army still needs surgeons with special training in orthopaedic surgery, surgery of the head, brain, in plastic oral surgery, and in dental surgery. If you have had training in any one of these branches and are willing to enter the Medical Reserve Corps, please write me.

These departments in the Surgeon General's Office are willing to take a certain number of young men who have had good hospital experience and give them an intensive training in one of these special branches.

If you belong to this group, or know of any young men who do, please write me and give names and addresses.

Very sincerely yours,

JOSEPH COLT BLOODGOOD.

THE STATE MEDICAL SOCIETY OF WISCONSIN

ORGANIZED 1841

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NEXT ANNUAL SESSION, MILWAUKEE, OCTOBER, 1917

The Wisconsin Medical Journal, Official Publication

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SOCIETY PROCEEDINGS

COLUMBIA COUNTY.

Columbia County Medical Society held its regular meeting at the City Hall, Portage, on September 12th. The secretary being absent from home, Dr. J. A. Roberts of Portage acted as secretary. Twelve physicians were present. Dr. Force, president of the society, called the meeting to order. Minutes of the last meeting were read and approved. An address by Mr. Hamilton, a Canadian Army man, on Hospital Units and the War in general, was the feature of the evening.

Motion was made and carried that the fee bill adopted by the Society, be sent to each member of the county, upon their request only.

The question of our society joining the Tri-State Medical Society was brought up, only to be dropped again, with the understanding that individual members could act independently of the county society.

A. F. SCHMELING, M. D., *Secretary.*

CLINICAL CONGRESS OF SURGEONS OF NORTH AMERICA.

The eighth annual session of the Clinical Congress of Surgeons of North America, will be held in Chicago, Oct. 22-27. This will be one of the most important conferences of surgeons in America. All the phases of modern warfare, as regards the medical service, will be discussed. Those who will address the meetings are Dr. Alexis Carrel, Sir Berkeley Moynihan, of Leeds, England; Dr. Jos. A. Blake, Dr. George W. Crile, Col. Thos. H. Goodwin, R. A. M. C. A feature which proved of great interest at Philadelphia, the cinematographic exhibitions of surgical operations, will be repeated at this meeting.

MINNEAPOLIS, ST. PAUL AND SAULT STE. MARIE RY. SURGICAL ASSN.

The annual meeting of the "Soo" Surgical Association will be held in Chicago, Oct. 22 and 23, 1917, the first two days of the meeting of the Clinical Congress of Surgeons of North America. This arrangement will make it possible for the members of the Association to enjoy a week of exceptional interest and importance. The "Soo" Surgeons' meeting will be clinical in character, the program being as follows: Oct. 22. Clinic at Cook County Hospital by Dr. George F. Thompson. Visit to the Industrial Medical Department of Sears, Roebuck. Visit to the Annie W. Durand Hospital for Contagious Diseases, with talks by Prof. Ludvig Hektoen and Dr. George H. Weaver. Business meeting at the Auditorium Hotel, the headquarters of the Association. Annual banquet, free to all members of the Association, at the Auditorium Hotel. Oct. 23. Clinic by Dr. Halstead at St. Luke's Hospital.

Members are urged to notify the secretary, Dr. J. H. Rishmiller, 1101 Metropolitan Bank Bldg., Minneapolis, whether or not they will attend this meeting. The presi-

dent of the Association is Dr. John M. Dodson, 24 E. Washington St., Chicago.

MARINETTE-FLORENCE COUNTY

Marinette and Menominee County Medical Societies with a delegation from Oconto County met at Hotel Marinette on Sept. 12, 1917, to listen to an address by Dr. L. M. Warfield, Marquette University, on "Intra-venous Therapy."

The meeting opened with the usual routine of business. The minutes were read and approved and communications read from state and national legislators in reply to memorial sent by the society relative to food conservation by discontinuance of manufacture of food stuff into alcohol. A letter from Senator Husting was read replying favorably to request of the president of the society for his vote on the bill abrogating the patent on salvarsan. The secretary reported a letter from Senator Husting expressing his willingness to support the Owen amendment relating to the raising the rank of medical men in the service.

The greater part of the evening was given over to Dr. Warfield's informal discussion of Intra-venous Therapy. The lecturer opened with a history of the method, enumerating its advantages over the subcutaneous and intramuscular methods, described the technique and explained the elements of danger and how they easily may be avoided. He then carefully took up one by one the drugs that have been administered in this manner, giving their value and dosage. He also discussed in brief the present status of intravenous administration of vaccines and serums, gave passing attention to ether anesthesia by the method and to the functional kidney tests with phenolsulphonephthalein, phloridzin, etc.; briefly discussed transfusion, its various methods; and the administration of sod. bicarb. and glucose for shock. Every phase of the subject was covered thoroughly.

The president, Dr. H. F. Schroeder, expressed to Dr. Warfield the thanks and gratitude of the society for his valuable address.

Major Barrett, who was in the city on work of the Council of National Defense, was called upon. He made a few pointed remarks relative to the Food Conservation Act and the enlistment of physicians for war service.

Dr. Redelings, councilor, read a report he had prepared to send to the council on availability of medical men in the county for war service.

The lecture fund being exhausted, the question of whether or not the university extension course be continued through another year was discussed and decided unanimously in the affirmative.

Society adjourned to meet on Oct. 9.

LUELLA E. AXTELL, *Secretary.*

ROCK COUNTY

The first meeting of the year of Rock County Medical Society was held at the Y. M. C. A., Beloit, on September 25th. There were thirty members in attendance. Dr. J. S. Evans of the University of Wisconsin gave an

interesting talk on Focal Infections, illustrated with lantern slides. The next meeting will be held at Janesville, Oct. 30, and will be a banquet meeting, at the Myers Hotel. Dr. C. H. Bunting, Madison, will address the society on "Modern Aspects of Diseases of the Blood."

**Have you bought your Liberty Bonds?
Do it now!!**

NEWS ITEMS AND PERSONALS

DR. A. M. KERSTEN, DePere, observed his seventieth birthday anniversary, on August 23rd. Dr. Kersten is one of the pioneer physicians of Brown County. He was born in Rhenish Prussia, and received his education at the Jesuit College in Feldkirch. He came to the United States in 1866. He is a graduate of Detroit Medical College.

DR. R. O. PETERSON, Racine, elected a member of the Board of Health of that city recently, has been chosen secretary of the Board to succeed Dr. L. N. Schnetz, resigned.

DR. HIRAM J. SMITH, assistant superintendent of the Anna State Hospital, Illinois, was appointed last week superintendent of the Illinois Charitable Eye and Ear Infirmary in Chicago. Dr. Smith formerly practiced at Oakfield, Wisconsin.

DR. A. M. BENSON, Hartford, has been appointed by the Industrial Commission, to act as issuing officer of labor permits to children between the ages of 12 and 17 years. His district includes Hartford, Erin, Addison, Schleisingerville, Polk, Richfield and South Germantown.

DR. D. C. LEAVENS, Fairchild, is suffering from an affection of the right arm, the result of a bite on a finger while operating. Dr. Leavens underwent an operation at Eau Claire on Sept. 27th.

DR. SAMUEL KLINE, formerly professor of histology and embryology at Fordham Medical School has been appointed assistant superintendent at the Waldheim Park Sanitarium, Oconomowoc.

DRS. C. G. SCHWALBACH and M. N. PITZ, who for the past two years have practiced their profession under the firm name of Schwalbach and Pitz, at Juneau, have dissolved partnership. Dr. Schwalbach will continue alone, Dr. Pitz having removed to Menasha.

DRS. J. F. McNARY, H. E. BRADLEY, W. F. WEGGE, W. F. BECKER, E. T. LOBEDAN, F. C. GESSNER, H. W. POWERS and AUGUST DOERR, Milwaukee, who submitted bills of \$50.00 a day for expert testimony, in the Schumacher insanity trial, have had their bills cut down by the court to \$4.00 a day. Judge J. E. Uselding cited a Wisconsin statute, which fixes the pay of doctors in insanity cases at \$4 a day, with mileage at 10 cents a mile. The physicians will appeal from the decision.

DR. A. J. PULLEN, Fond du Lac, a member of the State Legislature, who recently received a commission as 1st Lieut. in the Medical Reserve Corps, will not retire from the Legislature to take his position in the Army, until after the special session, which will probably be called some time in November.

DR. T. D. SMITH, Neenah, now in one of the war hospitals in France, is reported wounded in an air raid. Dr. Smith is at the Officers' Hospital with a fractured knee.

Word has been received that Dr. G. L. Bellis, formerly in charge of Muirdale Sanitorium, Wauwatosa, has arrived in France. He left in September with the first Canadian-American Joint Expedition.

LIEUT. EDGAR BEDFORD, Sheboygan, who has been stationed at Ft. Riley, Kansas, for the past three months, has been transferred to Ft. Worth, Texas.

DR. I. A. MYERS, Cottage Grove, has been commissioned a 1st Lieut. and has been ordered to report at Ft. Benjamin Harrison, Ind.

Five Milwaukee physicians have received appointments as special examining surgeons, with the rank of lieutenant, from the Surgeon General. They are Drs. Arthur J. Patek, J. D. Madison, J. G. Taylor, L. G. Sykes and W. B. Ford. During September they were stationed at Camp Robinson, Sparta, but on October 1st were transferred to Waco, Texas.

DR. C. A. RICHARDS, Rhinelander, has been appointed a major in the Medical Officers' Reserve Corps.

DR. GEORGE C. RUHLAND, Milwaukee, now stationed at Fort Sill, Okla., is to be placed in charge of the sanitary work of building the new cantonment at that place, which is to accommodate 30,000 men. It is rumored that Dr. Ruhland is slated for a higher commission than that of first lieutenant, which he now holds.

DR. E. P. EVANS, South Milwaukee, in response to the call for service, left for Fort Riley, Kansas, on Sept. 8th.

CAPT. O. E. LADEMAN, Milwaukee, has been ordered by Surgeon General Gorgas to report at Camp Funston, Ft. Riley, Kansas. Capt. Lademan has been named one of two heart examiners for Camp Funston.

MAJOR JOHN R. MCDILL, Milwaukee, is now stationed at Linda Vista, near San Diego, Cal. Major McDill served in the Phillipines during the Spanish-American War, and last year spent some time in Germany in the hospital at Graudenz.

Luther Hospital, Eau Claire, has received a third \$5,000 gift from Mrs. Peter Truax. Her first \$5,000 gift to the hospital was made during the building fund campaign.

Oct. 1 marked the opening of the new Plymouth Hospital and Training School for Nurses at Plymouth, Wisconsin. The building is of two stories and basement. The hospital is able to take care of thirty patients.

The Milwaukee Children's Hospital is the recipient of a gift, made by Mrs. Emilie Nunnemacher of Milwaukee, of a lot to be used as a building site for the new hospital.

The Frederic Hospital at Frederic, owned by Drs. Arveson and Diamond, has been leased to the Sisters of St. Joseph's Hospital, Superior.

Marshfield's city council in a special session, voted to raise \$3,000 by taxation, to provide the city with an isolation hospital, to be included in St. Joseph's Hospital and conducted in connection with it. This action was taken pursuant to a proposition of the Sisters of St. Joseph's Hospital, who propose to add an extra story to one of the

wings now in course of erection, for \$3,000 and \$7 per week each for the care of patients, either sick, poor or contagious cases.

A campaign for \$500,000, to be used in increasing the capacity of the new Columbia Hospital, now being erected at Milwaukee, will be launched. The plans permit increasing the facilities of the hospital to a great extent. Only one wing now is being built. With the \$500,000 to be raised, two more sections will be erected, forming a U-shaped structure. The portion now being constructed is to be four stories high.

The Infants Fresh Air Pavilion at Waterworks Park, Milwaukee, closed for the season on September 1. The city council provided a fund of \$2,000 for the maintenance and operation of the pavilion.

At a recent meeting of the city council of Wausau, the matter of the establishment of a state co-operative laboratory in Wausau was taken up. Dr. C. A. Harper, State Health Officer and Dr. W. D. Stovall, state bacteriologist, were present and explained the proposed plan.

The State Board of Control has reported the waiting list at the various tuberculosis institutions as follows: Wales 44; Tomahawk Lake Camp 27; the various county sanatoria about 39 each. The last legislature last year appropriated \$50,000 for the construction of a tuberculosis sanatorium in northern Wisconsin. The increasing waiting lists at the institutions suggests that the work may be undertaken sooner than originally planned.

DRS. WILL J. and CHARLES H. MAYO have turned over their savings to the University of Minnesota. At a meeting of the Board of Regents of the University, Dr. Will J. Mayo, who is a member of the board said: "We turn over as an outright gift to the regents, the bulk of our savings of a generation. The money came from the people, and we feel it should be returned to the people." The total amount turned over to the University is \$1,650,044.

The summer health record for Wisconsin shows that during the month of July there were reported to the State Bureau of Vital Statistics, five cases of infantile paralysis and three deaths, and in August six cases and two deaths. In the summer

of 1916 a total of 475 cases occurred throughout the state, and the total deaths from the disease reached seventy-nine.

The fight against tuberculosis has been taken up by the Marine Corps of the United States. The Sergeant in charge of the Milwaukee office has received instructions from Washington to compile a list of men rejected because of this disease. This record will include names of applicants from June 1 to August 30, 1917. Another list will be of cases from Jan. 1 to May 31, 1917. The information will be sent to Dr. H. A. Pattison, medical field secretary of the National Association for the Study and Prevention of Tuberculosis.

The Milwaukee Medical Society has taken new quarters in the Colby-Abbot Building, and removed its library and reading rooms there.

At Lawrence College, Appleton, the first of a series of post-graduate medical courses, under the auspices of the University Extension, was held recently for local physicians. Wisconsin is the first state in the Union, so far as is known, that is carrying instructional work to physicians. The work is in charge of Drs. Rock Sleyster, Waupun and F. C. Rinker, Madison. The first meetings of the series were held at Fond du Lac, from there a day two-session was held at Oshkosh. The course comprises three weeks.

Judge J. C. Karel of the Juvenile Court, Milwaukee, has sent the county board a proposal for the creation of another county salaried position, that of alienist of the Juvenile Court. Dr. A. W. Rogers, Oconomowoc, has been serving voluntarily for the past two years.

Wisconsin State Board of Medical Examiners met in special session on September 14th, at the office of the secretary, Dr. J. M. Dodd, at Ashland. The Board took up the matter of allowing licenses by reciprocity from other states. The next meeting will be held at Madison in January. The two regular meetings of the Board are held at Madison and at Milwaukee in June.

The substitution of the aeroplane for the ambulance, as a conveyance for wounded soldiers, who are to be removed long distances, is under serious

consideration in France. Tests made have proved highly satisfactory, a fifteen mile journey being accomplished in a 12 minute flight. There is no jolting while a wounded man is enroute to a hospital via aeroplane.

The Association of Military Dental Surgeons of the United States, it is expected, will soon have over one thousand members, and hope to have two thousand before the first of the year. To be eligible for membership in this Association, it is necessary to have, at some time, received a commission in the Army or Navy as a dental surgeon. A journal of the Association is now published, and it is hoped to make it of interest to both the Medical and Dental professions.

MARRIAGES

Dr. Jacob Henry Terlinden, Bonduel and Miss Alydia Hoge, Jackson, on August 22, 1917.

Dr. Lyman Alden Cops and Miss Stella Bernice Muratt, both of Madison, on July 16th.

REMOVALS

Dr. C. F. Lehnkering, Darlington to Florida.

Dr. J. H. Blekking, Stratford to Sheboygan Falls.

Dr. W. E. Meanwell, Madison to Columbus.

Dr. D. G. Hugo, Oshkosh to Chilton.

Dr. H. J. Edwards, Milwaukee to Ripon.

Dr. J. C. DeWane, Boyceville to Ossette, Mont.

Dr. A. W. Slaughter, for the past several years practicing at Ephraim, will remove to Green Bay, his former home.

Dr. G. A. Steele, of Redgranite, intends to locate at Poyette for the practice of his profession.

Dr. J. O. Lunn, of Chicago, has decided to locate at Brodhead.

Dr. W. H. Goeckerman has left Milwaukee, and is now a member of the Staff at the Mayo Clinic.

DEATHS

Dr. Charles C. Dalton, Wiota, Wisconsin, died on September 15th of pneumonia, aged 39 years.

Charles C. Dalton was born March 18, 1878, at East Delavan, Wisconsin. He attended the District School at East Delavan, the local High School and Elkhorn High School, taking his preparatory course for the study of medicine at Dixon College. He graduated from Bennett Medical College with the class of 1903. On November 20, 1912, he was married to Miss Lulu Larson of Wiota, Wisconsin. He practiced his profession for some time at Chicago before coming to Wisconsin.

A GREAT LITTLE HABIT.

Uncle Sam is really doing his people a favor in offering them Liberty Loan bonds. Thrifty American citizens have never heretofore had a good public security into which they could put whatever small savings they had at any one time. In France almost everyone is a creditor of the government. The rentes are issued in small denominations so that everyone can participate. The French have faith in their government and its securities. They know that the rentes are safe, that they return as high an interest as could be expected when one considers their safety and their marketability. Hence the Frenchman with \$50 or \$100 slaps it into a government bond and keeps it there for the few weeks or months it may be idle before he has other uses for it.

But in the United States the general public has had no such opportunity. There are thousands of good bonds but they come in large part from Wall Street. The small local bond issues have limited markets and it is difficult to find out anything about the strength of the issuing company. The savings banks pay interest but twice a year and unless the money can be left for six months there is no return upon it. The government, on its part, offered no security accessible to the saving public. The national bank act had placed the older government bonds on an artificial basis so that they gave a return on the investment of less than two per cent. And there were no government bonds of small denominations. But the war has changed all that. The government has had to come direct to the people for funds. The Liberty Loan has been issued in small denominations in the French fashion. There are bonds for all. Soon, it is predicted, the people will begin to acquire the government bond habit. Whenever they have \$50 they will buy a bond. Then they will always have the four per cent coming in on whatever savings they have. Whenever they need cash they can sell the bond within an hour or two of the need and pocket the principal together with a few shekles of earnings. The government bond habit is a great little habit.—*Chamberlain's*.

Don't forget the Liberty Bonds. Buy now.

DEPARTMENT OF NURSING

Conducted by Miss Stella Fuller, 566 Van Buren St., Milwaukee, Wis. Please address items of news and articles for this department to the editor of the department, 566 Van Buren St., Milwaukee, Wis.

The Annual Meeting of the Wisconsin Graduate Nurses' Association which met in Milwaukee, October 2nd and 3rd, was, without doubt, the most successful meeting the Association has even known. One hundred and fifty nurses from all parts of the state listened attentively to the two days' program.

Addresses were given by the Honorable Daniel W. Hoan, Dr. C. A. Harper, Madison; Rev. Paul Jenkins; Dean Lathrop; Miss Mary Wheeler, Chicago; Miss Charlotte Van Duzor, Grand Rapids, Michigan; Miss Anne Mae Coleman, Manawa, Wisconsin; Miss Frances Ott, Morrocco, Indiana; Miss Eleanor Thompson, Chicago; Miss Hazel Morton of Mendota, Wisconsin; and Miss Ellen Sabin.

The State League of Nursing Education organized as a section of the State Nurses' Association, promises most hopefully for the profession in Wisconsin. All superintendents of Training Schools, instructors or supervisors are eligible for membership.

There were many lively discussions of problems connected with the nursing profession.

The Milwaukee County Hospital Alumnae Association conducted a book stand and magazine table. Luncheon and afternoon tea was served by the Milwaukee County Nurses' Association.

Mrs. Louis Warfield and Miss Fry gave delightful vocal numbers during the social hours. The following reports were given by committee members:

Every Liberty Bond bought brings us nearer peace.

REPORT OF STATE RED CROSS NURSING COMMITTEE.

The personnel of the state committee has been changed by the resignation of the chairman, Cora V. Nifer, on account of poor health and by the death of Miss Grace Palmbach of Appleton.

Miss Good before her resignation in July, appointed me to "carry on" the work which Miss Nifer had been doing but the vacancy caused by Miss Palmbach's death is still unfilled.

As you know, the activities of the Red Cross Nursing Service as well as all other branches of the Red Cross have been greatly increased by the demand for service in the war zone.

The most of the state Red Cross Nursing work is done by local committees. Our state has only three local committees on nursing, Madison, Milwaukee and Oshkosh.

Miss Nifer tried to have other committees organized but the small number of enrolled nurses in the different localities has made this impossible. The increased enrollment during the past six months should change this condition and make it possible to have committees in La Crosse and Eau Claire at least.

Correspondence with Misses Zuppann and Dastych of La Crosse leads me to believe a committee can be formed in La Crosse. We hope this may be done at the earliest possible moment, possibly at this meeting.

Much activity has been shown in the organization of classes for "Instruction for Women." Classes have been conducted in Madison, Milwaukee, Neenah, Waupun and Racine. Possibly in other places of which he have no knowledge.

The Red Cross Nurses in Milwaukee giving instruction were Ella McGovern, Katherine Olmsted, Bertha Schultz, Kate Kohlsaat and Stella E. Mathews.

Mrs. Mabel Bradshaw examined all of these classes. Twenty-four in all have been conducted in Milwaukee since February, 1917. Other classes begin in October. Seven of the young women who have taken this instruction have been in the Milwaukee Hospital for the seventy-two hour work. Two of these seven are going to enter regular training courses and possibly two others may also take up training.

The Superintendent of Nurses at Milwaukee Hospital says: "A small class entering the Hospital acts as a stimulus to my probationers." She is quite willing to accept these young women in small classes for the seventy-two hour work in the hospital.

Mrs. Partridge has been appointed full time instructor by the Milwaukee Chapter. Rooms have been opened in the Security Building.

Two nurses represent nursing interest on the Educational Committee of Milwaukee Chapter, of which committee Mrs. J. Cary James is an efficient chairman.

Following are the reports from the three local chapters:

MADISON.

Total number enrolled nurses, 23.

Number nurses enrolled preceding year, 4.

Number of applications not yet acted upon, 7.

The Nurses who rendered Public Service by going to border were: Miss Hesseman, Mrs. Schmitt, Brownsville, Texas, six months; Miss Albers, Mrs. Ochsner, Eagle Pass, Texas, six months.

Other nurses served as Public Safety Committee during entrainment of troops at Madison for cantonment.

Classes in Elementary Hygiene and Home Care of the Sick were also given.

This Committee has had regular meetings. Average attendance, 4. One vacancy on committee.

MILWAUKEE.

Number of nurses enrolled, 147.

Number enrolled during preceding year, 34.

Number of applicants rejected by local or National Committee, 3.

Number of nurses resigned, 5.

Number enrolled for teaching, 20.

Public service rendered—three nurses to foreign service: Miss Siegfried, Miss Divine, on Emergency detachment now serving with Hopkins Unit somewhere in France; Miss Katherine Olmsted on Special Commission to Roumania.

Informal talks have been given to nurses at Trinity Hospital by Miss Nifer; St. Mary's and Maternity Hospital by Miss White; three talks at country association meetings; one talk by Miss Wilson to nurses at club house; Mrs. Gladman one talk in Michigan; Miss White in Whitewater; Miss Dietrichson at Oconomowoc, Pewaukee and Delafield; Miss Olmsted at the State Normal School; Mrs. Bradshaw in the High Schools.

For ten days Miss Fuller gave an hour a day instruction in First Aid to the Milwaukee High School Girls' Bible Conference at Lake Genesee.

Regular meetings of the Milwaukee Committee have been held with a few extra meetings. Average attendance, 6. Vacancies on committee, none.

OSHKOSH.

Total number of nurses enrolled, 12.

Number enrolled during year, 3.

Number applications yet to be acted upon, 4.

Public Service rendered in assisting to organize civilian relief work. Talk at Jubilee Meeting and securing a Red Cross Nurse to conduct examination. The Committee gave \$15.00 for Red Cross Work. Miss Erdmann was sent to foreign service. Informal talks, 1. The Committee does not hold regular meetings. Vacancies on committee, 1.

A very great deal of work has been done in Milwaukee by the local committee relative to getting the full quota of nurses for the Base Hospital Unit.

It is the duty of every registered nurse to become enrolled to serve her country in any capacity for which she is fitted.

Respectfully submitted,

STELLA S. MATHEWS.

**Have you bought your Liberty Bonds?
Do it now!!**

REPORT OF COMMITTEE ON REVISION OF CONSTITUTION.

The Committee on the revision of our State Constitution and By-Laws begs to submit the following report:

Because of the growth of the American Nurses' Association it was found necessary to revise the constitution and by-laws of that organization, since under the old form of membership much duplication occurred, consequently much unnecessary clerical work and expense.

At the New Orleans Convention in 1917 the revision committee suggested that after 1918 meetings of the A. N. A. should be held once in two years, that no new permanent members would be accepted after 1918 and suggested that all permanent members should resign in order to avoid duplication in records. They also suggested that membership in the A. N. A. come only through state organizations.

Several other changes were recommended with which you are familiar if you read your Journals but the question of revision is our problem at present.

A national charter has been asked for. This passed the Senate but not the house. Since this had failed, a motion to incorporate under the laws of the District of Columbia was made and carried at the meeting in Philadelphia. This seemed better than under the laws of any particular state.

The committee of the A. N. A. sent to all States a proposed constitution for state and district associations.

This committee would suggest that a nurse be engaged to make a survey of the state preparatory to forming districts and organizing associations in these districts. Also to make a budget of expense which would enable the different alumnae associations in the state to intelligently work out a basis of fees which would be adequate for all expense.

Respectfully submitted,

KATE KOHLSAAT, R. N.

NOTE: A copy of the revised constitution will be sent each member of the State Association so that she may become familiar with revisions. Later a special meeting will be called for consideration and passage of revised constitution.

Don't forget the Liberty Bonds. Buy now.

REPORT OF DELEGATE TO AMERICAN NURSING CONVENTIONS HELD IN PHILADELPHIA, APRIL, 1917.

It is always a privilege to attend the National Convention of Nurses and I wish to express to this body my sincere appreciation of the privilege of attending the conventions as one of your delegates.

In 1907 the American Society of Superintendents of Training Schools, as the National League of Nursing Education was then known, met in Philadelphia. The American Nurses' Association a few days later in Richmond, Va. The public health nurses then had no national organization. I attended the Philadelphia meeting and have the program filed.

Except for two addresses of welcome we listened to nurses who presented only training school and nursing problems. A very small number of nurses attended and almost no one else.

Just a decade later (the National Organization of Public Health Nurses, then five years old) the three organizations met in Philadelphia in joint session with

a program so rich and varied, that one grew bewildered in trying to determine which meetings to forego.

A new plan was introduced by the program committee by which a joint session was held where subjects of mutual interest were discussed and a representative from each society was given a place on the program. This joint meeting was immediately followed by three separate round tables and it is a well known physical law that no body can be in three separate places at one and the same time.

Not only did leaders in the nursing world take part on the programs but men and women of national reputation in the educational and social fields came from distances to fill places on these same programs. The result could but be inspiring, stimulating, gratifying, and could I give you a title of what I received I should feel satisfied.

Since the papers have been appearing in the American Journal of Nursing it would be a waste of time to present any part of them to you.

With two exceptions the meetings were held in the Bellevue-Stratford Hotel, which alone housed one thousand of the visitors to the Conventions. Although the attendance was unexpectedly large, the business was carried on without confusion.

On Thursday, April 20th, was held the first joint meeting with the presidents of the three organizations on the platform, Miss Goodrich presiding.

Her address stands out among the many fine things of the week and will bear much serious study. She later introduced Mr. Thomas Mott Osborne as one of the world's greatest humanitarians. You will remember that he is a man of great wealth with a passion for prison reform. That he went voluntarily into Auburn prison as an inmate, afterwards became warden of Auburn and then of Sing Sing, that for political reasons charges were brought against him and he was removed. His appearance indicates that the burden of the reformer is a heavy one. He proved an entertaining and forceful speaker.

On Friday morning Dr. Goler of the Rochester, New York, Health Department, talked on Communicable Diseases. He was one of the first if not the first man to establish milk stations with a resulting notable decrease in infant mortality. He proved a live wire with a happy faculty for carrying facts home.

The Health Insurance Session held in the Academy of Music brought out many citizens as well as nurses and was second to the Red Cross Meeting in size. While you have informed yourselves as to what was given us, no cold print can do justice to Miss Pauline Newman of the International Garment Workers' Union. Her shrewd good sense, her independence of thought and speech, and her personality endeared her to the great audience. If you ever have an opportunity to hear Miss Newman by all means take advantage of it.

Miss Beard of the Instructive District Nursing Association, Boston, who opened the discussion, always gives a worthwhile talk and has a voice equal to any demand made upon it, a fact which is of great satisfaction to her audience.

On Saturday morning the Modern Point of View in the Teaching of History by Miss Jessie Evans of the Wm. Penn High School for Girls proved unusually interesting. The Bird's Eye View of the Teaching of History with Projectoscope by Miss Stewart of Teacher's College served admirably to show how far we have gone toward developing the educational side of our training schools. In fact the responsibility of the nurse has an educating factor was most strongly brought out in the meetings. That, of course, makes adequate preparation absolutely essential for this great responsibility.

The attendance at the Red Cross Meeting, also held in the academy of Music, was estimated at four thousand. The presence in Washington of a foreign commission detained Dr. Gorgas, which was a disappointment, but the meeting was brilliant.

Practical demonstrations are always of interest and those held on Tuesday evening were no exception. The work was beautifully done and one found much to bring away for future use.

As you are aware, during the past year organizations throughout the country and individual members have been working for a national charter for the American Nurses' Association, in order to secure greater working privileges than were granted by the New York charter under which organization was effected. On account of the important measures before Congress it was impossible to secure its attention for this bill and there was no certainty of doing so in the near future. Acting upon the advice of Mrs. Fox, the parliamentarian, a District of Columbia Charter was secured as giving practically the same privileges with somewhat less prestige.

Miss Nutting reported the Robb Fund to have increased to the amount of \$26,000, giving quite a sum annually for scholarships in Teachers' College. There were five scholarships granted within the year from thirty-three applications.

It was largely due to the efforts of Dr. Criswell of California that nurses are now classed as professional women. A message of thanks was voted her.

The Journal Board reported a good financial condition and offered to assume the greater part of the salary of an Inter-state Secretary. Nurses were urged to further support the Journal by subscriptions and news items and articles.

The amendments to the by-laws for the reorganization of the American Nurses' Association were accepted to become effective January 1, 1918. Wisconsin should reorganize with at least five hundred members, which would represent a very small percentage of the number of nurses in the state. The Phillipines, Alaska and Hawaii had applied for affiliation so the by-laws were made to read States, territories and dependencies and so provided for them.

The A. N. A. effected an affiliation with the National Federation of Women's Clubs. They have the privilege of sending three delegates to the Convention who may take part in discussions, but have not the power to make motions or vote. The advantage is educational.

Very beautiful resolutions were presented by Miss Riddle and adopted, pledging to President Wilson the

sympathy and loyalty and service of the 40,000 women represented by the American Nurses' Association.

The American Nurses' Association voted to ask the proper authorities that the nurses in military hospitals be given a definite status in order that they may have authority to regulate hygienic conditions in these hospitals, since they are responsible for said conditions.

The Merchants and Manufacturers' Association of Milwaukee has been anxious for some time to secure the National Conventions for their city and offered this year to send a representative to Philadelphia if that would be likely to clinch the matter. Since any city wanting to entertain the conventions must go on record to that effect for some time, invitations were presented from the M. & M. Association, the County Association of Nurses, the State Association of Nurses and Mayor Hoan. Cleveland will be the meeting place in 1918. Providence, R. I., was crowding Cleveland for the honor. After 1918 the meetings will be biennial.

Pledges for the Relief Fund were the only ones featured and we pledged \$50 for the Wisconsin Association of Graduate Nurses.

Tea was served each afternoon by Women's Clubs of Philadelphia and the tea rooms were crowded. One afternoon faint musical sounds were heard from the doorway of a tea room. On working our way through the crowd we found a large group of children from nine to fifteen years of age singing the folk songs of some unpronounceable Russian Province. They sang in the mother tongue with utter lack of self consciousness, but their sweet music could be heard only a few feet from the platform, so great was the chatter of tongues and clatter of spoons.

Saturday afternoon was entirely given over to sight-seeing and social affairs. A trip to Valley Forge was arranged where lunch was served by the Maryland State Association of Graduate Nurses assisted by chapters of the D. A. R. Tickets were exhausted early in the day and some of us enjoyed instead a trip to Germantown through beautiful Fairmont Park and along the river.

On Sunday patriotic services were held in all the churches and ushers met groups of nurses at the hotel and conducted them to the churches of their choice. Each church had its beautiful large silk flag trimmed with gold fringe. Those who attended Calvary Presbyterian Church for the morning service heard a wonderful sermon and Kipling's Recessional beautifully sung.

Philadelphia was rampant with patriotism. The American flag flanked by the French and British emblems was everywhere in evidence. Soldiers were marching and bands playing by day and night.

If one ate where there was an orchestra, the exercise involved in standing at least twice during the meal for the Star Spangled Banner led rather to the consumption than the conservation of food.

Wisconsin was represented by five nurses.

Altogether the convention was a notable one and will long be remembered by those fortunate enough to be in attendance.

Respectfully submitted,

MARY E. GOOD.

REPORT OF DELEGATE TO STATE FEDERATION
OF WOMEN'S CLUBS.

The twentieth Annual Convention of the Federation of Women's Clubs of Wisconsin was held at the Grand Ave. Methodist Church in Milwaukee on November 8-10 inclusive, 1916, by invitation of the Federated Women's Clubs of the fourth district.

It may be opportune to introduce to this body the Federation and its real scope.

The Wisconsin Federation was organized in 1896 and admitted to the General Federation of Women's Clubs in 1897. Incorporated under the laws of Wisconsin in 1908. It therefore was celebrating its 20th anniversary in 1916. There are now in the federation 243 Clubs with a total membership of 12,480 women. And this meeting was characterized by the largest body of delegates in its history, 448 women from every corner of the state and representing every interest embraced by the Federation. The exceptionally large delegation was doubtless due to the fact that a special membership campaign had been waged which resulted in the addition during the preceding year of 37 new clubs representing 1,482 members. Conspicuous among these is the Wisconsin Association of Graduate Nurses with its membership of 130. Next to the largest club admitted during the year.

The departments of work are 16 in number, as follows: Art, Civics, Civil Service Reform, Conservation, Country Life and Rural Club Extension, Education, Political Science, Home Economics, Industrial and Social Condition, Legislation, Literature and Library Extension, Drama, Music, Press, Public Health, Wisconsin History and Landmarks. The reports of the various committees on these lines of work were submitted and showed interest and activity. Here were 448 energetic, capable, enthusiastic American women assembled with a definite purpose: the bettering of the race, the bettering of the home, the bettering of all living conditions for Wisconsin, for the nation and for the world.

Verily "The World do move" and women are putting their shoulders to the wheel to move it in the right direction.

Little more than a decade ago, in the city of St. Johns, Newfoundland, a court decided that certain privileges could not be accorded to women, because said privileges were for persons, and a woman was not a *person*.

In reporting the work of the Federation for the preceding two years, Mrs. Anna B. Kinsman, our most efficient, retiring president, stated that an effort had been made by the working committee to concentrate and secure as definite results as possible. The most significant efforts having been the Baby Week Campaign, the Endowment Fund Campaign, and the Membership Campaign already referred to. The Baby Week Campaign, she stated, was a great success. Wisconsin being one of the foremost states in the movement. The hearty cooperation of four great state organizations were secured in this work: The State Board of Health, the Anti-Tuberculosis Association, the Library Commission and the University Extension Department.

Local reports from every quarter recorded the cooperation of doctors, nurses, ministers, teachers, editors, librarians, business men and city officials—a brilliant demonstration of what can be accomplished by united, enthusiastic effort.

The motto suggested to the Federation at the beginning of Mrs. Kinsman's term of service was "Forward together for service" and evidently that had been the key to their success.

Mrs. Strathern, General Federation Secretary, reported that since the last state meeting five clubs had joined the general Federation.

The musical rendition through the entire convention was exceptionally fine. The topic for consideration at the afternoon session the first day was "Women's Clubs and Young Women." Miss Lois Kimball, Dean of Women, University of Wisconsin, gave a most striking address on "The Relation of the College Woman to Her Community." She gave many wise and practical suggestions as to what to do with the young woman whose college life has made her capable of being perpetually bored by the home spun people and conditions of the simple life.

Miss Agnes Nestor of Chicago, President of the Woman's Trade Union League, spoke on "What Organization Can Do for Women," which was followed by a most interesting discussion.

The Executive Board at its session on Tuesday afternoon, November 7th, having voted to confer upon Mrs. Chas. S. Morris of Berlin the title of Honorary Founder of the Wisconsin Federation of Women's Clubs, the title was duly conferred at the Banquet held on the evening of the first day.

A revision of by-laws occupied the attention of the meeting on Thursday. By-law on delegates was revised to read as follows: Clubs having a membership of 50 or less shall be entitled to 2 delegates, clubs having a membership of over 50 and less than 100 shall be entitled to three delegates, clubs having a membership of 100 shall be entitled to five delegates. For every additional 50 or major fraction thereof one delegate shall be allowed. On Thursday afternoon conferences open to all club women and friends interested in the several subjects were conducted by the chairmen of the departments. From the standpoint of the nurse the best address of the convention was given by Dr. J. N. Hurty, Secretary of the Indiana State Board of Health on "Getting a Better Race."

Not least among the pleasant and interesting features of the convention was the delightful reception with musical program given at Milwaukee Downer Auditorium.

The report of the 13th Biennial Convention of the General Federation held in New York City on May 24th to June 2nd inclusive, 1916, was most intensely interesting and one is quite impressed with the humanity and sympathy in this nation wide co-operative work.

The key note through it all seemed to be "Enlarge-ment," an ever widening circle that should surround and embrace all human needs.

Being a representative of our own honorable Associa-

tion at such a gathering was a distinct privilege for which I thank you.

Respectfully submitted,

AMELIA T. RICHIE.

Every Liberty Bond bought brings us nearer peace.

Irkuntz, Siberia, August 31st, was received in Milwaukee on October 5th. Miss Olmsted said the party was well and happy and expected to reach Roumania in good condition.

Have you bought your Liberty Bonds? Do it now!!

NEWS ITEMS AND PERSONALS.

NEENAH.

Three nurses from Neenah attended the Annual Meeting of the State Association of Graduate Nurses and returned feeling much stimulated for another year's work.

Two new physicians have located in Neenah recently, occupying the offices of physicians who have gone for military service. These are Drs. Pitz and Tupper.

Miss Marie Klein, graduate of Theda Clark Memorial Hospital Training School has been employed by the Menasha Carton Company to do industrial nursing.

Miss Miriam Walker of the same training school began activity as school nurse at Waukesha October 1st.

KENOSHA.

Members of the Faculty of the Kenosha Hospital Training School were hostesses at a party for the class of 1920 Saturday evening, September 29th.

Plans were made to have similar parties each month, the different classes taking their turn as hostesses.

MADISON.

The Wisconsin State Hospital held graduation exercises, Tuesday evening, September 18th.

Dr. W. F. Whyte, President of the State Board of Health, gave the address and Dr. F. I. Drake presented diplomas to the four graduates.

A reception and dance followed. The graduates were entertained the following evening at a dinner and theater party by members of the Senior Class which consists of seven student nurses.

This is the first class to be graduated since the course of training has been changed to three years. The training now is two years at the Wisconsin State Hospital and one year in the Cook County Hospital, Chicago, with which it is affiliated.

Dr. Frank L. Drake is superintendent of the Hospital and Miss Hazel E. Morton, Principal of the Training School.

MILWAUKEE.

A few Milwaukee nurses are taking lessons in English and Public Speaking with Professor Rounds at the University Extension Building.

The Friday Teas at the Nurses' Club House are being well attended. All nurses are invited to come and bring their knitting.

A card from Miss Katherine Olmsted, mailed in

ABSTRACTS

UNLOCALIZED INTRACRANIAL INJURIES. Evans, C. A., Milwaukee, Wis. (*American Journal of Surgery*, December, 1915), emphasizes that in all cases of skull injuries the important lesion is the injury to the brain and other cranial contents produced either by the trauma or by the resulting circulatory disturbance. As the symptoms of intracranial injuries merge into one another they should be looked at from the viewpoint of intracranial pressure, whether or not due to a contusion, hemorrhage or edema, or whether or not there is a fracture. The essential point is the amount of this pressure and the ability of the brain to withstand it. An injury of the brain is followed by edema, round-cell infiltration, and, if severe, an extravasation of blood. This process of reaction is a space restricting process, a compression. In E.'s experience a fairly reliable method of determining the presence and amount of intracranial pressure has been a lumbar puncture, and he believes that this should be a routine procedure in every case of suspected intracranial injury, as it will also be relieving this pressure aid in the recovery.

After speaking of localized and unlocalized intracranial injuries E. suggests in the latter class the more general use of the split muscle subtemporal decompression and drainage operation after the method of Cushing as the operation of choice. It relieves the pressure by draining away the cause of the space restriction, whether cerebrospinal fluid or blood, and by the removal of a portion of bone from the temporal region allowing for certain amount of expansion of the brain. Since 1909 E. has performed the operation in 33 cases of unlocalized intracranial injuries, the majority of them, cases of basal fractures, not as a routine procedure, but only in those cases where he felt that it was indicated to save life or to prevent further complications, and when in doubt. Nine of the 33 cases died, a mortality of 27%. Taking the average mortality, following such injuries, without operation, at 50%, this is a reduction in mortality of about 23%.

From his experience E. points out the following: In compound fractures of the vault with an uninjured dura and evidence of a subdural clot it is more advisable to open the dura and deal with the clot through a subtemporal opening than through an opening in the dura at the site of the injury. The subtemporal opening is suggested as the one of choice in a middle meningeal hemorrhage. If the findings at operation on one side are not sufficient to account for the symptoms or if there is no improvement, the opposite side should also be opened. The sooner after the injury the operation is done the better the prognosis. A "decompression" with-

out opening the dura is not a decompression and of no use. A decompression alone is not sufficient and a basal drainage must also be done, and to insert the drain the base of the brain should be elevated.

The clinical histories of 5 cases are reported in detail. In one the subdural hemorrhage was on the side opposite to the choked disc and in another case on the same side as the marked choked disc. Both cases demonstrate the value of choked disc and increased blood pressure in the diagnosis of intracranial tension in the so-called closed cranial injuries.

C. Z.

THE MOST IMPORTANT SYMPTOMS OF MULTIPLE CEREBRO-SPINAL SCLEROSIS. Gjessing, Harold, (*Norsk Magazine for Laegevidenscab*, Feb. 1915, p. 145. Abstract in *Centralbl. f. pr. Aug.*, 40, p. 145), mentions in detail the ocular symptoms of multiple sclerosis and reports 5 cases illustrating their importance for the early diagnosis of the disease. One case showed initial retrobulbar neuritis with central scotoma, one ptosis, paresis of the internal rectus and central scotoma, one associated paralysis of fixation, one transient amaurosis with remaining enlargement of the blind spot, one interior ophthalmoplegia.

C. Z.

ON THE INJURIES OF THE EYE OBSERVED IN THE EYE DEPARTMENT OF THE FORTRESS HOSPITAL 1 AT KOENIGSBERG DURING THE FIRST 7 MONTHS OF THE WAR. Oley-nick, Rosa, (From the eye clinic of Prof. A. Birch-Hirschfeld in the University of Koenigsberg. *Zeitschrift f. Aug.*, 34, p. 301), reports on 94 eye injuries, 54 of which were perforating, and of these 26 produced by rifle shots. The most severe injuries were caused by rifle shots, due to their explosive action. Cases of intraocular foreign bodies were mostly brought about by artillery projectiles. In these cases Roentgen rays and the sideroscope were of excellent help for the diagnosis.

A few cases may be mentioned. In one case the lower temporal portion of the cornea was hazy and the fundus very much veiled. In the vitreous a fine opacity was visible and behind it a whitish place. The Roentgen skiagraph showed here a piece of a projectile of the size of the head of a pin, around which an exudate of the vitreous had formed. This was absorbed after iodide of potash, inunctions, and diaphoresis, and V. rose from 5/35 to 5/8.

In a case of double perforation the wound of entrance was 5 mm. from the temporal corneal limbus. The pupil reacted promptly, 1.5 disc diameters from the nasal border of the disc were several retinal hemorrhages and in their midst a round, light colored place, the exit of the foreign body, which, as Roentgen rays revealed, was lodged behind the globe in the orbit. The macula was perfectly intact and V. 5/5.

Eleven cases of contusions were observed with deleterious changes of the interior of the eyeball by injuries of the orbital bones, the eyeball not having been struck by the projectiles. Their effect on the eyeball consists in sudden indentation of the posterior pole, leading to rupture of the tense intraocular tunics, especially the chorioid, and profuse intraocular hemorrhages. After

their absorption isolated typical ruptures of the chorioid, concentric to the optic disc, were found, or the retina and chorioid showed multiple and irregular tears with secondary cicatricidal processes, which appeared as whitish, irregular, partly pigmented, foci, (retinitis proliferans). The sudden indentation further leads to increase of intraocular tension, the whole contents are driven forwards, which may be followed by detachment of the retina, dislocation of lens, iridodialysis, but the effect of contusions is mostly limited to the posterior segment of the eyeball. In 4 injuries of the optic nerve the eyeball appeared without irritation, only the wide immovable pupil suggested the lesion.

C. Z.

Don't forget the Liberty Bonds. Buy now.

BOOK REVIEWS

TEXT-BOOK OF OPHTHALMOLOGY. By Hofrat Ernst Fuchs, Professor of Ophthalmology in the University of Vienna. Authorized translation from the twelfth German Edition; completely revised and reset, with numerous additions specially supplied by the author and otherwise much enlarged by Alexander Duane, Surgeon Emeritus Knapp Memorial Hospital, New York. With 462 illustrations. Fifth Edition, 1067 pages, Philadelphia and London. J. B. Lippincott Company. Cloth \$7.00.

When we had the pleasure of reviewing the twelfth edition we emphasized the extraordinary high number of editions of this famous book that became necessary within the 20 years since its first appearance. It again brilliantly displayed the unceasing efforts of the author to secure for his work its pre-eminent place among the best books on ophthalmology. An entirely novel feature was the addition of a whole new part constituting a splendid introduction of 62 pages on the general physiology, pathology, and therapy of the eye. Since that time no new German edition has been issued and none is at present contemplated.

We therefore heartily hail the new American edition by Dr. Duane which in several senses is a new work. For, as the translator states, Prof. Fuchs not only gave his permission for the insertion of very valuable additions by the translator, but also himself supplied notes of many additions and changes. Some radical changes in the arrangement of the text by the translator, with the approval of the author, will make the book more serviceable as a work of reference: "The many pages of remarks, in fine print, which were massed as an appendix at the end of chapters of major divisions, and whose considerable value and interest was somewhat observed by this arrangement, were split into shorter sections, each placed in direct juxtaposition to the portion of the text with which it was related. Some of the more important items in the fine print transferred bodily to the text, also the descriptions of various operative methods previously scattered through other portions of the book to part V, on operations."

The section on the diagnosis of ocular paralyses has

been entirely rewritten, and numerous and important changes, necessitated by the progress of ophthalmology, have been made by the translator in all parts of the book, indicated by brackets and the initial D. Most important are the additions in the chapters on glaucoma, diseases of the retina, refraction, accommodation, and operations, and scattered through all parts of the book, to mention only a few, the remarks on tuberculin and vaccine therapy, visual field and color tests, mapping of scotomata and the blind spot, extragenital gonococcus infection, inclusion blennorrhoea, etiology of trachoma, etiology of iritis, sclerosis of the chorioid, Elliot's summary of glaucoma theories, retinitis exudativa, angiomatosis retinae, and the newer operations, etc. These changes, so largely made on his own responsibility, certainly will not serve to detract, as the translator modestly says, from the many excellencies of the book which for 27 years has remained a model of its kind, but greatly enhance its value by imparting to it an unusual completeness, which deserves the highest praise and recommendation. The innovation of numbered paragraphs and the excellently arranged index greatly facilitate orientation.

The number of illustrations has been increased from 392 to 462. The external appearance, print and paper, are excellent.

C. ZIMMERMANN.

THE DIAGNOSIS AND TREATMENT OF ABNORMALITIES OF MYOCARDIAL FUNCTION, with special reference to the use of Graphic Methods. By T. Stuart Hart, A. M., M. D., assistant professor of Clinical Medicine in the College of Physicians and Surgeons, Columbia University, Visiting Physician to the Presbyterian Hospital in the City of New York. Illustrated with 248 engravings, 240 of which are original. The Rebman Company, New York, 1917. Cloth, 8 vo., 320 pages. Price \$4.50.

The study of cardiac irregularities, particularly those of the conduction path, has been greatly furthered by the use of the polygraph and the electrocardiograph. Much that was obscure and empirical has been placed upon a scientific basis.

There have been a number of books dealing with the subject of abnormalities of the myocardium published within the past two or three years. Dr. Hart's book is well written and profusely illustrated. He takes up his subject systematically, and by text and figure makes clear his meaning. The chapters on The Extrasystole, Auricular Flutter, Auricular Fibrillation, Alternation and Mixed Arrhythmias are especially valuable and are written in a lucid style.

We would recommend this book to all who desire to know more about the heart. The subject appears highly technical and might at first sight frighten the casual reader. We assure him that he will be led along so insensibly that before he knows it he is feeling intimate with the new terminology and has learned many valuable points in the diagnosis and treatment of the diseases of the myocardium. The book is singularly free from typographical errors except one, a bad one, on page 216. Several lines are omitted evidently, destroying the sense

of the paragraph. Otherwise the book is well made and the figures well reproduced.

COLLECTED PAPERS OF THE MAYO CLINIC, 1916. Octavo of 1,014 pages. 411 illustrations. W. B. Saunders Co., Philadelphia and London, 1917. Cloth, \$6.50; Half Morocco, \$8.50, Net.

The vast fund of information, clinical study and data, surgical procedures and technique contained in this, the new volume of collected papers written by the various members of the staff of the Mayo Clinic, can hardly be adequately summarized or commended in the space allotted a book review. One must see and study the articles in order to appreciate their real value, as well as the large variety of important subjects that are here dealt with. The separate articles are well presented and arranged, and the many illustrations accompanying them are clear and convincing.

F. B. McM.

Every Liberty Bond bought brings us nearer peace.

BOOKS RECEIVED

THE PRACTICAL MEDICINE SERIES comprising ten volumes on the year's progress in Medicine and Surgery under the general editorial charge of Charles L. Mix, A. M., M. D., professor of Physical Diagnosis in the Northwestern University Medical School.

Volume IV. GYNECOLOGY, edited by Emilius C. Dudley, A. M., M. D., professor of Gynecology, Northwestern University Medical School; Gynecologist to St. Luke's and Wesley Hospitals, Chicago and Sydney S. Schochet, M. D., instructor in Gynecology, Northwestern Medical School, adjunct gynecologist, Wesley Hospital, Chicago. Series 1917. Price, \$1.35.

Volume V, PEDIATRICS, edited by Isaac A. Abt, M. D., professor of pediatrics, Northwestern University Medical School, attending physician Michael Reese Hospital with the collaboration of A. Levinson, M. D., associate pediatrician Michael Reese Hospital. ORTHOPEDIC SURGERY, edited by John Ridlon, A. M., M. D., professor of Orthopedic Surgery, Northwestern University Medical School. With the collaboration of Charles A. Parker, M. D. Price, \$1.35. The Year Book Publishers, Chicago. Series 1917.

OBSTETRICS. A text-book for the use of students and practitioners by J. Whitridge Williams, professor of obstetrics, Johns Hopkins Hospital, Baltimore, M. D. Fourth enlarged and revised edition with seventeen plates and six hundred and eighty-five illustrations in the text. D. Appleton & Company, New York and London, 1917.

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The Wisconsin Medical Journal

Volume XVI

MILWAUKEE, NOVEMBER, 1917

Number 6

ORIGINAL ARTICLES

ACIDOSIS: FROM A PHYSIOLOGICAL-CHEMICAL VIEWPOINT.

CHESTER J. FARMER,

PROFESSOR OF BIO-CHEMISTRY, MARQUETTE UNIVERSITY
SCHOOL OF MEDICINE,

MILWAUKEE.

Undoubtedly there is no greater problem facing the physician of today than that of suitably adjusting the individual and his environment. A priori this relationship must be reciprocal. The fitness of the external surroundings, both social and economic, may readily be learned by inspection and inquiry. It is no less important to know of any change in the suitability of the internal environment; which is in reality the circulating fluids of the body. To this end it is necessary to make use of special physiological and chemical methods.

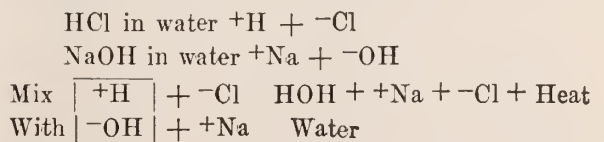
The circulating fluids of the body consist essentially of blood and lymph. These, acting as an atmosphere for the cells, must first of all supply them with food material, and subsequently remove all waste products of their metabolism. Lymph may be regarded chemically as having approximately the same composition as blood plasma. Since blood contains 60 to 70% by volume of plasma, and 30 to 40% by volume of corpuscles, which float in it, changes in the internal environment of the body must manifest themselves in changes in the composition of the plasma. The function of the red blood corpuscle is in this paper intentionally disregarded.

From an analysis of blood made by Carl Schmidt¹, plasma is seen to contain 90.1% of water, 0.8% of fibrin, 8.2% of other proteins as albumen, globulin, etc., and 0.85% of inorganic material. The inorganic bases consisting of sodium, potassium, calcium, and magnesium (mag-

nitudes in order named) are combined with hydrochloric, sulphuric, phosphoric, and carbonic acids. Plasma, therefore, consists of protein material dissolved in a dilute solution of various inorganic salts. Although the amount of salt seems extremely small, it is sufficient to serve as the principal regulator of body reaction.

One of the first properties of a solution to be investigated is that of its chemical reaction. Simple solutions of protein material such as albumen, possess but little ability to change the color of a strip of litmus paper when dipped into them. Salt solutions, on the other hand, possess a wide range of reaction, some being neutral while others are distinctly acid or basic. In 1887 Arrhenius² announced that salts, as well as acids and bases, when dissolved in water, are dissociated or split up into particles called ions which show electro negative or electro positive characteristics. Those acids which act most vigorously upon metals liberate in solution, large amounts of electro positive particles or hydrogen ions. It is now known that the strength of an acid is proportional to the completeness with which it dissociates into hydrogen ions. Bases dissociate in the same way, with the production of electro negative particles or hydroxyl ions, and their strength is measured by the completeness of this dissociation. In both cases, there is a "companion" ion of opposite electrical nature liberated at the same time. If we mix the proper amounts of a solution of an acid and a base together, we find that by dipping litmus paper into the liquid, it fails to respond with a color change. We have neutralized the acid by means of the base, as is known to all. Since the litmus paper does not respond with a change in color, those ions formerly responsible for it must be rendered inactive.

Reference to Chart I will make this clear.



¹Read before the Section on Medicine at the Annual Meeting of the State Medical Society of Wisconsin, Oct. 3-5, 1917.

CHART I.

In this example, the ionization of hydrochloric acid and sodium hydroxide when dissolved in water is indicated. Upon mixing the solutions the hydrogen ion units with the hydroxyl ion forming water, as well as liberating energy in the form of heat. The solution now contains only the "companion" ions, and upon evaporation of the water common salt separates out. From this it will be apparent that the reaction of a solution depends upon the amounts of hydrogen ions or hydroxyl ions present in it. Their magnitude is ordinarily termed the hydrogen ion concentration (+H) or hydroxyl ion concentration (-OH) of a solution, and is expressed in terms of normality, i. e. the concentration of these ions in one litre of water.

distilled water. A condition of acidity implies simply a greater concentration of +H than of -OH. Alkalinity implies the opposite, namely, a predominance of -OH. The relationship of these conditions is shown on Chart II³.

Acidity	+H > -OH	+H > N.10 ⁻⁷ .
Neutrality	+H = -OH	+H = N.10 ⁻⁷ .
Alkalinity	+H < -OH	+H < N.10 ⁻⁷ .

CHART II.

It is customary in physiological work to speak of the hydrogen ion concentration of solutions that are distinctly alkaline. This will not be confus-

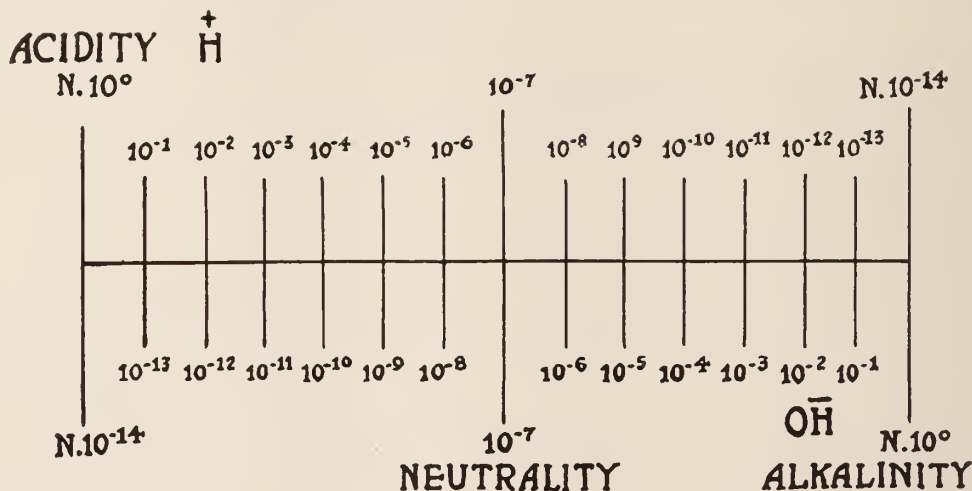


CHART III.

For example, we are all familiar with N/10 HCl. One litre of this solution contains 0.1 gram of hydrogen ions, and its hydrogen ion concentration is spoken of as 10⁻¹, using the decimal exponents to avoid cumbersome fractions in the more dilute solutions. Hydroxyl ion concentration is recorded in the same way.

In pure distilled water, which is known by all to have no influence upon litmus, the ionization is so small that it requires ten million litres to give one gram of ionized hydrogen. It is therefore one ten-millionth normal, or expressing it as a decimal its +H = 10⁻⁷. Since it does not turn litmus there must be present an equivalent amount of hydroxyl ions. It therefore has a hydroxyl ion concentration of N.10⁻⁷. A solution to be neutral must have its hydroxyl ions in equal concentration to its hydrogen ions. These can never exist together in amounts greater than that found in purest dis-

ing if we keep in mind that +H actually exist in alkaline solutions but in far less concentration than the -OH from whose predominance the solution takes its character. Chart III will make this clear.

CHART III.

From this it will be seen that:

N/10 NaOH has -OH = N.10⁻¹ or +H = N.10⁻¹³ and N/1000 HCl has +H = N.10⁻³ or -OH = N.10⁻¹¹.

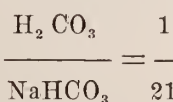
To still further simplify the terminology, Sørensen⁴ has suggested to express the hydrogen ion concentration as a simple number, which he indicates by the symbol PH. This number is the Briggs logarithm of the reciprocal of the hydrogen ion concentration. For example

An N/1000 HCl = 0.98 × 10⁻³ +H = PH 3.01 or N/10 NaOH = 0.65 × 10⁻¹³ +H = PH 13.19.

It will be seen that the exponent becomes higher the more alkaline the solution.

The reaction of blood remains remarkably constant within narrow limits. As an average, its normal hydrogen ion concentration is about 0.44×10^{-7} or PH 7.35. From this value it will be evident that blood is very slightly alkaline. Henderson⁵ emphasizes the importance of maintaining this reaction to the life process, and regards it like normal body temperature, as one of the chief physiological constants. Peabody⁶ states the situation in these words: "Undoubtedly the fundamental problem is that of the maintenance of the (physiological) normal reaction within the tissue cells, for in all probability most of the important chemical processes by which metabolism is carried on are intracellular, or at least are the result of the actions of substances formed within the cells, whose very formation and elimination into the blood depend on the balance of acid and alkali within the cell." In order that the tissues may be protected, the blood must be able to bring bases to the cells, thereby neutralizing the acid products of metabolic activity, and at the same time preserve its normal reaction.

Henderson^{7, 8, 9} has shown that blood is ideally adapted for this work. It contains proteins which possess both acid and basic characteristics, and in addition the plasma salts mentioned above, together with carbonic acid. Such a system can receive large amounts of acids without changing appreciably in reaction. The term "buffer" has been applied to solutions of this type. This buffer action is due largely to the simultaneous presence of a very weak acid and its salt, or to the presence of salts as the primary and secondary phosphates in various proportions. Blood plasma¹⁰ contains carbonic acid in such concentrations that it "automatically converts into bicarbonates all bases not bound by other acids". Free carbonic acid therefore, exists in the presence of sodium bicarbonate. This bicarbonate represents the excess of free and available bases after all non volatile acids have been neutralized. Since the amount of carbonic acid in blood is maintained at a constant tension by the lungs, it is reasonable to expect a fairly constant amount of bicarbonate to be present. Henderson¹¹ has found this to be the case, and has



shown the ration between

consequently is provided with a powerful buffer, capable of maintaining a constant +H concentration so long as this ratio remains unchanged. Blood also contains small quantities of phosphates which may assist if necessary in balancing its reaction.

In consideration of this normal ratio between free carbonic acid and sodium bicarbonate in the plasma, Henderson¹¹ states very clearly that a change in reaction of the plasma "can only happen by greatly varying the amount of sodium bicarbonate". From this it follows that plasma bicarbonate is in reality the alkali reserve of the body. It is reduced when free acids enter the blood, and in exact proportion to the amount of these acids. On this as a basis Van Slyke and Cullen¹⁰ have defined acidosis as "a condition in which the concentration of bicarbonate in the blood is reduced below the normal". The concentration of plasma bicarbonate is the crux of the whole matter.

As a result of tissue and food metabolism, acids are continually entering the blood. These are of two types, the volatile carbonic acid, and the non volatile inorganic and organic acids. Owing to pulmonary ventilation most of the carbonic acid is rapidly disposed of, and only an amount representing a tension of approximately 40 m.m. remains. The non volatile acids are neutralized chiefly by ammonia, except the phosphates which require alkali. As the blood passes through the kidney these products are excreted, the phosphates leaving most of their alkali in the blood and being eliminated in the acid form. By virtue of kidney function an acid urine is secreted from an alkaline blood. In this manner an accumulation of acid is prevented, and the concentration of plasma bicarbonate remains approximately constant.

From what has been said, it is clear that acidosis can only manifest itself when plasma bicarbonate is neutralized or used up. This may take place in diabetes on account of the enormous over production of acids, which are far in excess of the amount the kidney can eliminate. Also in nephritis when the excretory mechanism is involved, acids may accumulate. In both cases the acids neutralize bicarbonate and leave their salts in its place.

As the plasma bicarbonate is neutralized, carbonic acid must be set free, and subsequently pass out of the blood into the alveoli. This passage continues until the tension of carbonic acid in the blood and alveolar air is the same. Unless

increased ventilation of the lung occurs, the tension will increase above that of the physiological normal. It is impossible to form more plasma bicarbonate, consequently the carbonic acid increases out of proportion to the sodium bicarbonate. This results in an increased $+H$ concentration of the blood. As blood reaches the respiratory centre, the increased $+H$ concentration stimulates it, which is immediately followed by greater pulmonary ventilation and excretion of more carbon dioxide. The tension in the alveolar air is then lowered, and in turn the blood tension reduced.

the latter decreases. Determinations of alveolar carbon dioxide tension serve as an indirect measurement of the amount of plasma bicarbonate. The decrease in the latter is an index to the severity of the acidosis.

The remainder of the paper will discuss briefly a few of the methods employed for determining the severity of the acidosis.

The urine has long been over-estimated as a trustworthy source of information concerning processes occurring within the body. Its only real value is to inform us of the material leaving the

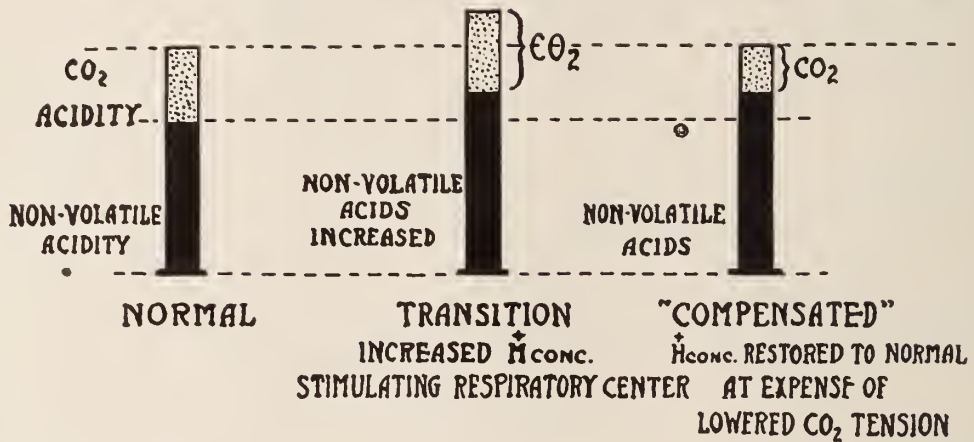


CHART IV.

When sufficient carbon dioxide has been removed from the blood to again re-establish the ratio of H_2CO_3 1
 $\frac{\quad}{NaHCO_3} = \frac{\quad}{21}$, the reaction of the blood has become normal, and the usual rate of respiration is again established. Van Slyke and Cullen¹² have applied the term "compensated acidosis" to this condition. When finally the accumulation of non-volatile acids reaches a stage where the respiratory mechanism can no longer keep the carbonic acid concentration in arterial blood down to approximately one-twentieth of the ever decreasing bicarbonate, the hydrogen ion concentration of the blood increases. To this stage, the term "uncompensated acidosis" has been applied by Hasselbalch and Gammeltoft¹³. Peabody¹⁴ illustrates these stages diagrammatically, as is shown on Chart IV.

blood, but can in no way indicate the amounts retained. The presence of acetone and diacetic acid in urine have long been known to occur under abnormal metabolic conditions. Beta-oxybutyric acid was added to this list in 1883 by Stadelmann, who found it in the urine of diabetics. When acetone bodies are found, the only safe conclusion is that they exist in blood. The absence of these in urine in no way justifies the opinion that they are not present in blood. Evidence exists to the effect that acetone is excreted with difficulty by the kidneys (Marriott¹⁵). In this connection it is interesting to note the evolution of the term acidosis. The word was introduced into the literature in 1906 by Naunyn¹⁶ to indicate that abnormal metabolism condition in which beta-oxybutyric acid is formed. Since the term is suggestive of acids in general, as Van Slyke and Cullen point out, it grew into common usage when other types of acid intoxication were discovered. It is now used to "indicate the effect of acids of any type in altering the acid-base balance of the organism". To put it more explicitly, the reduction of plasma bicarbonate or tissue alkali from any cause what-

From these diagrams it will be clear that associated with an increase in non-volatile acids, there is a compensatory decrease in the amount of carbon dioxide in the blood. This being in equilibrium with alveolar air, the tension of carbon dioxide in

soever, indicates a condition of acidosis in the body. As the acetone bodies are directly derived from the incomplete oxidation of fatty acids, their occurrence may more specifically denote a condition to which Allen¹⁷ has given the term "ketosis".

In 1850 Bossingault¹⁸ noted an increased ammonia output in the urine of diabetics. Similar observations have since been made by Hallervorden, Henderson and Palmer, Howland and Marriott¹⁹ and many others, both in diabetes and in other conditions associated with acidosis. The ammonia-nitrogen percentage may be misleading as an index to the degree of existing acidosis unless one

chain. A method less reliable but easier of manipulation has been described by Levy, Rowntree and Marriott²¹. Blood is placed in a small celloidin sac and dialized against physiological salt. To the salt solution is added after the sac has been removed, a few drops of dilute phenolsulphophthalein, and the color which is developed is compared with that of a series of standards phosphate tubes whose hydrogen ion concentration is known. Chart V²² shows the proportions in which basic sodium phosphate and acid potassium phosphate solutions (of equal molecular concentration) can be mixed to get the desired range of reaction. On

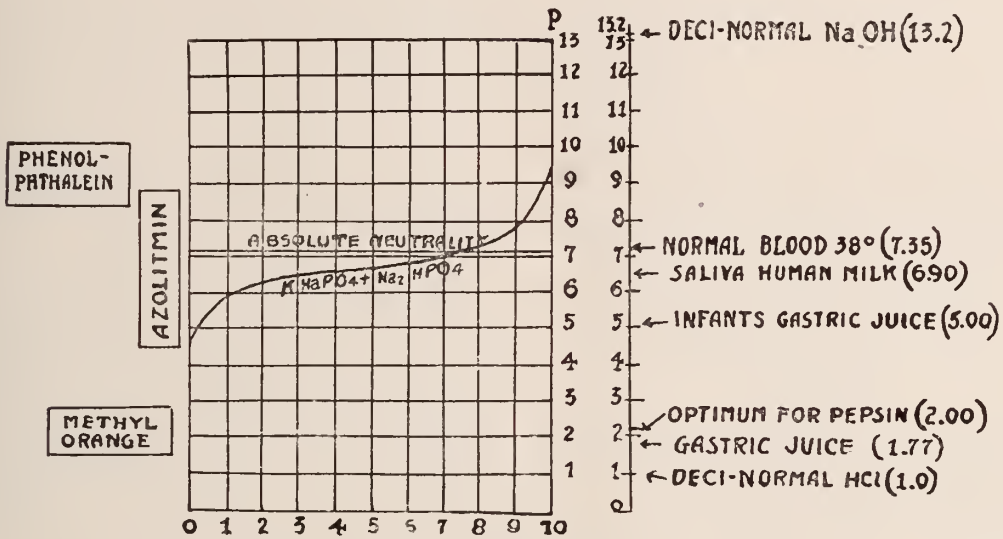


CHART V.

recalls the fact that very high values may easily be obtained on a diet poor in protein but sufficient in fats and carbohydrates. Under these conditions Folin²⁰ has obtained percentages as high as 11.3.

The hydrogen ion concentration of urine shows but little as to the existing acidosis. It in no way indicates the amount of reduction of available alkali within the body.

Since acidosis is a reduction in the reserve alkali of the body, the most rational manner of determining its severity is by measuring the bicarbonate content of the plasma. We have seen that the normal hydrogen ion concentration of blood is primarily maintained by virtue of the buffer action of carbon dioxide and sodium bicarbonate. The reaction can therefore change but little until the "compensated" stage is passed. The hydrogen ion concentration can be measured very accurately by an electrical method technically called the gas

the margin is shown the range of hydrogen ion concentration over which various indicators may be used. There are two serious objections to this method, first, carbon dioxide escapes from the blood during dialysis, and second, the dialysing membranes do not always show the same degree of permeability.

Van Slyke and Cullen¹⁰ have recently published a method for the direct estimation of plasma bicarbonate. It has the advantages of simplicity, accuracy, and of requiring but a few minutes. Blood is drawn from an arm vein with a syringe or McRae needle, oxalated, and centrifuged. The plasma is then removed and saturated with alveolar air, or air containing 5.5% of carbon dioxide. This ensures that all free bases exist as bicarbonates. One cubic centimetre of the saturated plasma is then placed in a special gas pipette²³ which has been previously filled with mercury.

After the addition of a small amount of sulphuric acid, the mercury is allowed to flow from the pipette, thereby producing a Torricellian vacuum. The plasma bicarbonate is decomposed, giving up its carbon dioxide. The mercury now re-enters the pipette and the gas passed to a graduated tube which is attached at the upper end of the apparatus, and its volume read at atmospheric pressure. From this reading the number of cubic centimeters of carbon dioxide bound as bicarbonate by 100 c.c. of plasma may be learned by reference to a special table. This is a true measure of the alkali reserve. Their results with this method are given on Chart VI²⁴.

Condition of Subject	C. C. CO ₂ bound as bicarbonate by 100 c. c. plasma
Normal resting adults, extreme limits...	47-53
Mild acidosis, not visible symptoms.....	53-40
Moderate acidosis, symptoms may be apparent	40-30
Severe acidosis, symptoms of acid intoxication	Below 30
Lowest CO ₂ observed with recovery.....	16

CHART VI.

The value of this method as a means of indicating early the approaching acidosis, and also in prognosis, cannot but be apparent to all.

We have seen that an increase in non-volatile acids neutralize plasma bicarbonate. In order to prevent an elevation of the hydrogen ion concentration, the blood gives up some of its carbon dioxide (volatile acidity). Since equilibrium is established between the carbon dioxide in blood and alveolar air, a measurement of its tension in the latter serve as an index of the degree of acidosis. The various methods in use for collecting samples of alveolar air for analysis have recently been reviewed by Boothby and Peabody²⁵. They recommend either that of Haldane or the modified Plesch method. In Haldane's method the patient gives a long, deep expiration into a rubber hose of about three-quarters inch diameter and four feet in length. By suitable technique a sample of this air is withdrawn and analyzed for its carbon dioxide content. In the Plesch method, a definite volume of air confined in a rubber balloon is re-breathed by the subject for about twenty-five seconds. Samples are then withdrawn and analyzed as in the Haldane method. The values for

normal carbon dioxide tension vary a little with the manner of collection. With Haldane's apparatus they range between 38 and 41 mm., while with that of Plesch, a higher value, between 40 and 45 mm. is observed. Marriott²⁶ has applied the color change of indicators at various hydrogen ion concentrations to determine carbon dioxide tensions. He bubbles the alveolar air through a bicarbonate solution which contains phenolsulphonphthalein as an indicator. As the reaction depends upon the

ratio of $\frac{H_2CO_3}{NaHCO_3}$, the tension of carbon dioxide in

the alveolar air determines the point of equilibrium and consequently the color of the solution. It is only necessary to compare this color with a series of standards whose carbon dioxide tension is known. The method is very quick and easy of manipulation. The apparatus is small and inexpensive and can easily be carried to the bedside. It is reliable only for comparative work, which however, is all the clinician requires.

The beneficial effect following the administration of sodium bicarbonate, either by mouth or intravenously in diabetes has long been known. With this in mind Palmer and Henderson²⁷ proposed that the amount of bicarbonate required to "reduce the urine to a point slightly more acid than blood" be taken as an index of the grade of acidosis. About the same time Sellards²⁸ suggested the so-called "alkali tolerance" test. It is based upon the fact that if a normal person receives 5 or at most 10 grams of sodium bicarbonate by mouth, his urine will probably become alkaline in reaction. In the event of acidosis a much larger amount will be required to produce the same change. To explain this, it has been suggested that the tissues have given up their supply of base to combat the invading acids. When more alkali is fed than immediately needed, it restocks the tissues before accumulating in the blood to such a point that it will be eliminated and thereby render the urine alkaline. This test is easy of application. Since large amounts of acids may arise as the result of abnormal cellular metabolism, it may indicate a condition of tissue acidosis even before there is any marked change in the blood.

SUMMARY.

The plasma, constituting an internal environment for the body is maintained at a definite re-

action primarily by the buffer action of carbon dioxide and sodium bicarbonate. Its normal value of PH 7.35 cannot change appreciably unless plasma bicarbonate is neutralized by non-volatile acids.

Plasma bicarbonate constitutes the real alkali reserve of the body.

Acidosis is that condition, arising from any cause whatsoever, in which the alkali reserve of the body is lowered.

Disease	No. of Cases	Alveolar CO ₂ Tension mm.	Urine			Alkali Tolerance*
			NH ₃ /N ₂ %	P+H	Acetone	
Syphilis	3	43.1	3.7	6.3	0	7
Epilepsy	2	40.9	5.6	5.7	0	10
Diabetes	6	35.8	13.9	5.5	+	50
Exophthalmic Goitre.	9	44.9	5.2	6.4	0	10
Primary Anemia	8	40.5	5.7	5.8	0	15
Chronic Nephritis...	6	38.9	3.5	5.4	0	26
Pneumonia	21	40.4	7.5	5.5	0	25
Rheumatism, Acute						
Articular	10	36.9	5.9	5.9	0	17
Nephritis Sub-Acute.	3	44.4	4.5	5.4	0	12
Lung Abscess	2	40.8	5.6	5.4	0	12
Gastric Cancer	2	38.4	9	5.6	0	40
Addison's Disease ...	2	38.5	5.5	4.7	0	25
Cirrhosis of Liver...	2	40.9	8.7	5.4	0	18
Cardiac Disease,						
Chr. Comp.	6	41.7	5.8	5.7	0	25
Normal		41-44	3-5	+6	0	5

*Gms. NaHCO₃ required to render urine alkaline in 2 hours.

CHART VII.

"Compensated acidosis" exists when the normal reaction of the blood is maintained at the expense of a decreasing alkali reserve and carbon dioxide tension.

"Uncompensated acidosis" is associated with a true change in the reaction of the blood.

The severity or degree of acidosis may be learned by estimating the carbon dioxide combining power of the plasma, the alveolar carbon dioxide tension, the hydrogen ion concentration of the blood in uncompensated acidosis, and the alkali tolerance.

The methods outlined make it possible to prevent a patient from suddenly going into coma without any previous warning.

The remaining charts give an idea of the applicability of these methods in various conditions.

Chart VII, shows the mean of values obtained by Frothingham²⁹ in various diseases.

Chart VIII, illustrates graphically the influence of an anaesthetic in reducing the alkali reserve of the body³⁰.

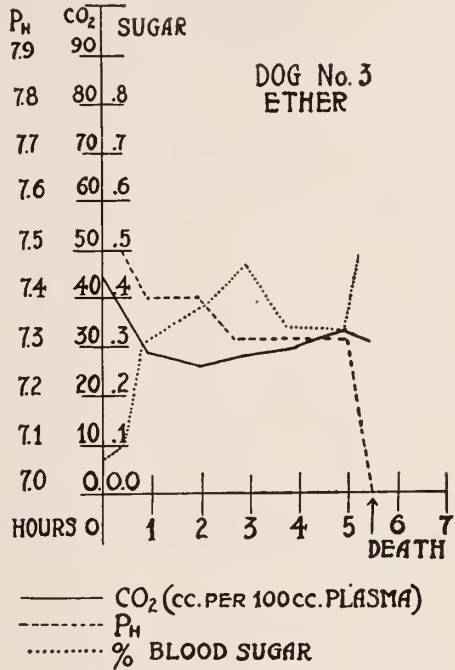


CHART VIII.

Date	Diet	Carb. gms.	Alv. CO ₂ mm.	CO ₂ per 100 cc. Plasma
Mar. 20	—Fast with Whiskey..	200	28.0	34.1
Mar. 19	—Fast with Whiskey..		17.9	23.8
Mar. 20	—Fast with Whiskey..		28.0	34.1
Mar. 21	—Fast with Whiskey..		31.5	46.8
Mar. 22	—Fast with Whiskey..		35.2	58.5
Mar. 23	—Fast with Whiskey..		31.5	52.4
Mar. 24	—Fast with Whiskey..		33.7	60.0
Mar. 25	—Fast with Whiskey..		35.4	58.0
Mar. 29	—Fast with Whiskey..		33.3	54.0
Mar. 30	—Green Vegetables ...	10	31.1	53.4
Apr. 1	—Green Vegetables ...	20	34.2	55.2
Apr. 3	—Green Vegetables ...	30	35.9	64.8
Apr. 6	—Green Vegetables ...	80	38.5	65.6
Apr. 8	—Green Vegetables ...	100	35.4	51.4
Apr. 15	—Green Vegetables ...	200	41.0	66.6

CHART IX.

Chart IX, is a table taken from a series of diabetic cases published by Stillman, Van Slyke, Cullen and Fitz³¹.

It is a pleasure to acknowledge my indebtedness to my assistant, Mr. Ernest W. Wood, and to the School's artist, Mr. Leo Massopust, for their kindness in preparing these charts.

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DISCUSSION.

CHAIRMAN: Gentlemen, I feel that my first duty is to offer the thanks of the meeting to Dr. Farmer for this paper, in which he presents the physiological-chemical fundamentals of the theory of acidosis, and to gain which I think one would have to make a rigid search far and wide in the literature. I know of no

one paper that gives so much as he has given us here

Before announcing the paper for general discussion, I would say that Dr. Eisendrath of Chicago, who is to read a paper in the Surgical Section this morning, has asked if he might discuss the paper, or very kindly agreed to discuss it, and as his time is limited, if Dr. Eisendrath is here now I will call first upon him.

DR. D. N. EISENDRATH Chicago: I thank you very much for the honor. I feel that I am in rather a strange field, because this is something from the laboratory standpoint, and the surgeon must depend upon those who devote their lives to this research subject.

I want to compliment Dr. Farmer by saying that this is the best and the clearest exposition of this entire subject that I have ever heard. He has made clear to me a number of things in the way of the value of the different methods of determining the degree of acidosis, especially the fluids which I have tried to glean myself from the books and have tried to have others explain to me, and have always been a little bit confused about. I think I now have a clearer notion of it than I have ever had before.

I do not know why I should be honored with opening the discussion because, as I say, from the standpoint of the chemist I know only from others. In conversation with Dr. Farmer a few moments ago—and that was the reason I was very anxious to hear his paper—I said that the surgeon is just beginning to wake up to the clinical importance of acidosis. The medical men have preceded us. They, for a number of years past, have applied the work of the laboratory to the bed-side, but it has only been within the last two or three years that the surgeon has awakened to the necessity of being able to interpret a great many of the clinical features that we see in the fluids of acidosis. What I refer to especially is the post-operative conditions that we see, which have become clear to us not only in the way of recognizing them, but also in our improvement in the methods of preventing them, and of treating them after we have recognized them.

My own experience in this direction extends back probably about 4 years. This may be an old story to some of you at least, but the more cases of this kind I see the more I realize how necessary it is for the surgeon to be awake to the possibilities in every post-operative case, or every case developing in the post-operative stage these symptoms of acidosis. One of the most striking symptoms, and the one that I used to look upon with terror whenever a case developed after operation, was hiccough; to me it always meant undoubtedly a uremia. I have now come to see that a certain proportion of these symptoms are the clinical expressions of an acidosis, and by recognizing them early enough and applying the necessary treatment it is possible to check that hiccough, which was, as I said before, formerly considered something that we could not surmount, and can rid the case of this symptom which, unless removed, will undoubtedly result in death. I will speak of the treatment in just a moment.

A second symptom which I have observed is the vomiting. If post-operative vomiting is not due to the anes-

thetic, to poison due to a uremic condition, like intestinal constriction, or peritonitis, you can be sure that acidosis must be at the bottom of it, and the vomiting is of a peculiar type. We see it expressed in the symptom known as acute gastric dilatation. A great many of the cases that we have been in the habit of losing in the past, as a result of not recognizing early enough as a post-operative gastric dilatation, we now know are due to this acidosis, and if we recognize the symptoms early enough by the vomiting of large quantities of brownish sour fluid, these cases can be saved. Anyone who has ever seen these cases will recognize the picture that I am trying to describe—the vomiting of pus basins full at a time without any effort, will see at once what a symptom this produces. Of course we know that there are theories as to other causes of acute gastric dilatation, but there are a certain percentage of the cases that are due to this condition. It seems as though the acidosis has some toxic action on the gastric membrane, and causes ecchymosis and escape of blood from the mucous membrane, and that gives rise to the brownish color of the fluid. And the strangest feature of the effect of acidosis on the stomach, as I observed it, is that even though the stomach be washed out, and the patient not given any fluid by mouth, there is a sort of gastric succorria, a paralysis of the power of the stomach, so that the stomach again fills up with fluid in a few hours, just as large a quantity as we have had before. Those are phenomena that we have all seen.

A third symptom that I have seen in children, as an expression of acidosis, is delirium. This has not been specially my own observation, but that of the nose and throat specialist also. After a tonsil operation, or an operation for the removal of adenoids, the moment a child begins vomiting a good deal after the operation, it becomes delirious, and I have noticed, especially in children, the high temperatures, running as high as 107, which were not due to anything else that we could detect, except the acidosis.

Those have been some of the clinical expressions of this acidosis. Now, as I said before, I have not seen it from the laboratory side, and scarcely anyone else has seen it from that side. In the conversation with Dr. Farmer before he read his paper he told me that those who have so far gone into the subject from the surgical standpoint have been really dilettantes. We have still to have the co-operation of a man like Dr. Farmer with the surgeon, who can watch his cases, and see the results. Now here is a man with hiccough; what is the degree of acidity which is typical of that condition; how much is your treatment going to influence that hiccough.

Now let me tell you how I to-day in my practice guard against the dread of acidosis, because it may interest you gentlemen as medical men who see these cases. Invariably when I do have an expression of acidosis I call in a medical man, and especially one whom I think has a good deal of knowledge on the subject of acidosis, to help me out of my troubles. That is the way we try to prevent it at the present time. We have learned not to starve our patients. Secondly, we try to give them

before operation as much alkali and carbohydrates as we can. That is my routine practice.

I might mention also that there seems to be some association between sepsis and acidosis which has not yet been cleared up.

When I have once succeeded in overcoming the hiccough I have had splendid success with an interavenous injection of 5 per cent. glucose. Those patients take 250 c.c., and it is marvelous to see some of the results. We have not tested it as yet in the test tube, but it is remarkable to see the influence of that glucose solution upon the hiccoughs. It stops within a few hours in a patient who you thought was in an utterly hopeless condition. He will change suddenly from a stuporous condition and become altogether brighter, and the result is a most favorable one.

I trust that the surgeons can interest such men as Dr. Farmer, Dr. Loevenhart and others in this subject, because it is of vital importance to us as well as to you medical men, with relation to acidosis and diabetes.

I want to again express my appreciation to Dr. Farmer for asking me to discuss this paper, and I thank you.

CHAIRMAN: We are very much obliged to you Dr. Eisendrath for your contribution to the discussion.

A general discussion of Dr. Farmer's paper is now in order.

PROFESSOR A. S. LOEVENHART, Madison: I also feel that Dr. Farmer has presented one of the most lucid papers that I have ever heard upon this complicated subject. I have appreciated the work that Dr. Farmer has been doing along this line. I have seen his apparatus, and the ingenuity which he has shown in devising his methods and apparatus, and it has been work of a class that has to be done in opening up this field in which it has been so difficult for us to get at the facts. I think that medical men will do well to realize a point that was brought up by Dr. Farmer at the beginning of his paper, about the importance of the environment of the cells of the body. We at first hardly realize the import of that remark. The cells are ordinarily bathed by their lymph, and the material that comes to them has gone through the process of digestion. A good deal filters through the liver, and is altered as it passes to the blood after this purity bath. The temperature is practically constant during health. Every time we give a dose of medicine we change the environment of the cells of the body. That is, of course, the mechanism by which drugs alter vital processes of the cells and the functional activity. One of the most vital and important phases of the environment of the cells of the body is this question of reaction. The physiologists have recognized this for a great many years, and in the last ten years the medical men have paid a great deal more attention to it than formerly. Still it might be well to mention a few of the well known instances. We know that the hydrogen ion concentration of the cells bears an important relation to their activity, and, next to the central nervous system, is probably the most important co-ordinating factor in the activities of the body.

We have known, of course, for years, that pepsin will not act except in the presence of certain hydrogen ion concentrations; we know that many of the enzymes require a very low hydrogen ion concentration, for instance, the enzymes of the pancreatic juice and the saliva, and are soon destroyed by any perceptible increase in the hydrogen ion concentration. The acid chyme on passing into the duodenum starts the secretion of pancreatic juice. Bayliss and Starling showed that this is an instance of co-ordination in the body which is affected by a change in the hydrogen ion concentration. As soon as the acid chyme comes in contact with the mucosa of the duodenum, it forms secretin, and the secretion causes secretion of the pancreatic juice. We have known since 1885 that the activity of the respiratory center is practically controlled by the hydrogen ion concentration that is present in the cells of that center. This again is largely controlled by the hydrogen ion concentration of the blood. This is the normal physiological mechanism for controlling the activity of the respiratory center: A man runs around the block, and begins to breathe very fast. Why? Simply because his muscles have produced more carbon dioxide, the hydrogen ion concentration is increased, and that increases the activity of the respiratory center. He has more carbon dioxide to get rid of, and does get rid of it through this stimulation.

Drs. Kolls, Dallwig and I studied, a few years ago, the effect of the hydrogen ion concentration on the bone marrow, and we found that in that case the hydrogen ion concentration has comparatively little effect. A few years previously Dr. Eyster and I studied the effect of the hydrogen ion concentration on rate of the blood flow through the heart, and we showed that an increase of the hydrogen ion concentration causes a great increase in the rate of perfusion, whereas a decrease in the hydrogen ion concentration greatly decreases the rate of flow by constricting the vessels. Undoubtedly the hyperemia in muscles caused by the increased activity, is due to the production of acid phosphate and carbon dioxide in the muscles, and the increase in hydrogen ion concentration causes vasodilatation, thus increasing the blood flow through the muscles.

There are undoubtedly a great many physiological mechanisms we do not understand now that are also controlled by the hydrogen ion concentration. Of course it is obvious, therefore, that for maintenance of life the blood must maintain practically its normal reaction. Everything would be upset if there is any considerable change in the hydrogen ion concentration of the blood. It would be incompatible with life. This work has been retarded very much by the fact that men expected to find a definite change in the reaction of the blood in different diseased conditions. As a matter of fact it does not occur. It is always compensated, and by the time there is an actual change in the hydrogen ion concentration of the blood, why of course it is too late for anything to be done. A significant discovery of recent years has been the importance of the buffer value of the blood, and it may become of great practical importance in medicine. The compensating factors are so large that

it is very difficult to get any change in the buffer value of the blood. The buffer value of the blood may be explained in this way: if you take 100 c.c. of distilled water, and add 1 c.c. of hydrochloric acid to it, that water becomes distinctly acid. The solution will turn blue litmus red, it will be sour, and it is perfectly obvious that it is acid. On the other hand, if you add 1 c.c. of hydrochloric acid to 100 c.c. of blood, you can't detect much change in the reaction on account of the alkaline phosphates and bi-carbonates maintaining the fixed reaction of the blood. Now you can determine if you desire to find out, how much acid you have to add to the 100 c.c. of blood in order to make it acid, and you will find in conditions of acidosis that it will take less than that of the normal. In other words, the buffer value has been reduced without any change in the reaction of the blood. The blood is no longer able to retain its reaction in the presence of such a large amount of acid. Some of the reserve alkalinity of the blood is used up, or we may say some of its reserve acid-combining power has been used up. And one of the propositions about acidosis has been the determination of the criteria of acidosis. Dr. Farmer has referred to the various methods used. For a time it was believed that a change in the distribution of nitrogen in the urine was of greatest importance. If the urea decreased and the ammonia in the urine increased, it was evidence of acidosis. As a matter of fact, we get varying degrees of acidosis without any change in the urine, no increase in ammonia and no decrease in the urea. The tension of the alveolar carbon dioxide, the buffer value of the blood, and finally the method of determining the amount of alkali you have to give to a patient in order to make the urine alkaline may all be used to determine the presence and the extent of acidosis. The latter seems a very simple method for clinical use, and a very good method, because at the same time you determine the degree of acidosis you are doing that which is apparently therapeutically correct. I do not believe that you can ever do harm with alkali by giving it to a person, if you do not continue to give it after the urine is once alkaline. That to my mind is the criterion of when a sufficient amount of alkali has been given to a patient with impending acidosis.

We have had some experience in Madison with the method of Marriot for determining the carbon dioxide tension of the alveolar air, and we like the method. It seems to me that it is going to be generally useful clinically. The war has interfered with our getting European glassware and the glass industry in this country being in its infancy, the difficulty of getting good glass that will not yield alkali is very great; and the worst of it is it does not give up all of its alkali at once, but continues to yield alkali as long as any glass is left. We have a large amount of good glassware left; we have steamed our glassware and prepared our standards. They have remained all right, and we have gotten excellent results in the few clinical cases we have studied. It is an experiment in the physiological laboratory. Every student determines the alveolar carbon dioxide by the Marriot method. It is a very simple

experiment. There is nothing to measure. You just dump a certain amount of the fluid into the test tube, and if you want to you can use that for a year without even changing it. Just let a person blow through it, stop it, and then compare with the standard series, and read off the carbon dioxide in per cent. or in millimeters. There is no trouble at all in determining the alveolar carbon dioxide tension to within 5 millimeters.

I again want to compliment Dr. Farmer on his very valuable contribution on this subject.

TUBERCULOSIS AND THE DRAFT EXAMINATIONS.

BY OSCAR LOTZ, M. D.,

WISCONSIN ANTI-TUBERCULOSIS ASSOCIATION,

MILWAUKEE.

Although this work is far from complete, I am presenting this brief report at the present time for various reasons. In the first place, I desire to make the medical profession of Milwaukee familiar with the purpose and scope of the work being done under the auspices of the Wisconsin Anti-Tuberculosis Association in connection with the draft examinations, and to report in a few words what has been accomplished up to the present time. By doing this I may possibly enlist the assistance of all the draft division boards instead of a certain percentage of them.

In the second place, I wish to take this opportunity to express our sincere appreciation for the interest and self-sacrificing co-operation of the draft division boards, in particular of the medical members. At the same time, I desire to acknowledge the splendid and conscientious work of those physicians comprising the Medical Board of Review, as well as the kindness of Marquette University for placing the rooms and equipment of its dispensary at our service.

And finally I hope perhaps to stimulate a little discussion of this subject, and thereby obtain some suggestions which might be used to advantage in the work of the future.

Our original intention was to cover the first draft only, but if the medical profession considers the results obtained worth while, we will attempt to continue the work throughout the examinations of all registrants.

While it is true that every rose has its thorn, it is likewise true that no ill wind but blows some good. Although the building up of our national

army has necessarily brought with it conditions which may halt for a moment the strides of constructive civil progress, it has at the same time brought with it conditions and opportunities the like of which many of us had never dreamed. That the medical profession, always seeking for better methods to alleviate human suffering, and ever alert for new truths with which to combat disease, has taken advantage of these opportunities is today well exemplified in the modern method of treating wounds, the control of the deadly gas bacillus infection, etc. But a few days ago Dr. Franklin Martin in an address before the State Medical Society held the medical profession responsible for the prolongation of the present war. The progress of medical science in preventing and controlling infectious diseases has largely shifted the medical burden of warfare to the shoulders of the surgeon, who through his skill and ingenuity has returned thousands of men to the service who, a few years ago would have been returned to civil life helpless and dependent upon others. If the prolongation of this war depends upon man power, verily, the medical profession must plead guilty to the indictment of Dr. Martin.

Cholera, bubonic plague, small-pox, typhoid, typhus fever and bacillary dysentery have all yielded to the constant hammering of medical science and have been, with the exception of localized outbreaks, where preventive measures had been neglected or rendered impossible, of minor importance.

Tuberculosis and syphilis, however, are not only holding their own, but are making inroads upon the health of our army which, unless the full machinery of civil and military organizations are set into motion, will bring about conditions, irreparable for years to come.

Tuberculosis and syphilis are alike in that both are diseases never charging in the open. Tuberculosis covers its approach through stealth and ignorance: syphilis by hiding its presence through shame and fear. Both diseases sap the vitality of the flower of our manhood—the man in the service of his country—and both diseases carry their death-dealing strokes into the heart of the civil population, there to continue their destructive work for years after the industries of peace have been resumed. “What irony” says King in his *Battle with Tuberculosis*, “that men should struggle to slay each other while in their midst there stalks an

enemy, common alike to man and beast, ever working misery and sorrow and dealing destruction and death!" These two diseases are today of paramount importance to the medical officers of our army, and to conquer them will require intensive application on the part of all three individuals concerned, the army officer, the soldier, and the civilian.

Syphilis is most frequently an army bred disease contracted and spread in the neighborhood of the camp, cantonment and the barracks, and must be largely fought on its own stamping grounds.

Tuberculosis differs in this respect because as Osler says, "In the majority of cases the germ enlists with the soldier. A few—very few contract the disease in infected billets or barracks." This is the weak spot in the armament of Major Tuberculosis and if we but sufficiently concentrate our efforts upon this one point, and attack with all the vigor and power that we can command, the lessons taught us by the experience of one of our Allies must bear gratifying results. Three years ago France, in its anxiety to raise a large army within a short time, yielded care and efficiency in physical examinations to speed and numbers and is today paying dearly for disregarding knowledge obtained during years of study and observation. According to the figures of Dr. H. M. Biggs, Commissioner of the New York State department of Health, up to February, 1917, France had returned about 150,000 soldiers to civil life because of tuberculosis. These were not men rejected upon admission, but men upon whom valuable time and large sums of money had been spent incident to the making of a soldier. Estimating the number of cases of tuberculosis among the men still in service, the discharged prisoners at present in Germany, and the civil population of France, Dr. Biggs says, "there would, therefore, be altogether probably not far from 500,000 cases of tuberculosis in France to be dealt with if the war were to be terminated at once. An estimate of 400,000 cases would seem to be really conservative."

Consider for a moment the heavy burden of caring for these invalids, placed upon an already man impoverished country, the tremendous expense involved in their treatment, and we may perhaps appreciate more readily the value that the thorough physical examination by the draft boards bears to the future welfare of the country. That the situation in France is not due to a want of efficient measures for the prevention of tuberculosis is

shown by the fact that Great Britain, after raising an army of over 5,000,000 men does not have a serious tuberculosis problem today.

With these facts pointing out the possible dangers ahead, the Wisconsin Anti-Tuberculosis Association decided to do its share, and laid out the following plans to cover both state and city.

STATE. The importance of keeping tuberculosis out of the army, and the value of discovering a large number of early and unknown cases was placed before every examining board in the State. With these facts in mind the boards were requested to keep a list of all suspicious and positive cases found. After the completion of the examinations, the boards were asked to send us a copy of these lists. While a number of these lists have been received, I regret to state that the responses were far from that anticipated. If we receive a sufficient number of names it is our intention to send nurses out to look up these cases, advising or suggesting medical treatment.

CITY. In the city our results were much more gratifying. A personal interview was had with almost every physician member of the draft board, in order to more fully explain our plans, and to receive his co-operation. He was asked:

- a. To instruct his assistants to reject or at least set aside for re-examination, all cases with doubtful pulmonary signs;
- b. To keep a list giving the names and addresses of all such cases, and to send us the list at the conclusion of these examinations;
- c. To send these men to a designated place on a definite date for re-examination by the Medical Board of Review.

This Medical Board of Review was organized for this purpose by the Wisconsin Anti-Tuberculosis Association and consisted of twenty-five of the best medical men in the city—all internists—and many doing special work along tuberculosis lines. A schedule was planned according to which eight physicians were on duty every evening from seven to ten o'clock to examine the rejected men. These men were all examined with the greatest care, and under the most favorable conditions; consultations were held if necessary, and most of the men were given fluoroscopic examinations by an expert roentgenologist. If doubt as to the diagnosis still existed, X-ray plates were taken.

Some of the division boards used the examination by the Board of Review as the official re-examination; other Boards made their own re-examination but sent the suspicious cases to the Board of Review so that a definite diagnosis could be made.

By means of a few figures I will attempt to show briefly the results of the work.

The total number of men that were examined during the first draft was 15,479.

The total number of men examined in those districts from which accurate reports were received, 10,779.

The difference in these figures is due to the fact that several boards sent in no lists to us.

Number of suspicious or positive cases reported, 348.

Number of men examined by Medical Board of Review, 251.

The difference here is again explained by the fact that while most of the boards sent us lists of the cases, all these boards did not send the cases to us for re-examination.

Out of the 251 cases examined, 124 or practically 50 per cent. were found to be positive cases of tuberculosis. Basing our estimation upon the cases examined, there would have been about 174 positive cases in the 10,779 men examined, or about 1.47 per cent. This figure is decidedly lower than those reported in other parts of the country. In one of the best residential districts of Chicago, 98 men out of 1,525 were rejected because of tuberculosis—a ratio of 6.4 per cent. These rejections were made only after four thorough examinations. In some counties in North Carolina the rejections numbered 5 per cent. I cannot but feel that these figures are too high, and that our ration of 1.47 per cent. of positive cases (not suspects) are more near the truth. Dr. Dublin of the Metropolitan Life Insurance Co. uses the figure 2 per cent. as a measure of active tuberculosis cases in the population at the draft age. Taking these lower figures as the basis of our calculation there should be between eight hundred and one thousand positive cases in the 50,000 men registered in the city. Is the medical profession in Milwaukee willing to put its shoulder to the wheel and prevent these men from joining the United States Army?

One other figure that may be of interest. Out of the 124 positive cases, 122 lived in the city of

Milwaukee, and out of these 122 positive cases living in Milwaukee, six are on record at the Tuberculosis Division of the Health Department. Is it at all surprising that the fight against tuberculosis is an uphill fight? Is it at all surprising that in spite of all the splendid work that is being done against this great white plague that the death rate is only slowly decreasing? Why are we so conscientious in reporting such comparatively harmless diseases as diphtheria, small-pox and typhoid fever and permit this harbinger of death to stalk its victims unmolested? Gentlemen, this is an indictment of the medical profession of Milwaukee that we can hardly be proud of.

This paper is not a treatise on the diagnosis of tuberculosis. That subject is far too important to be handled by one not an expert. It may however, not be amiss to quote for the benefit of all of us who are assisting in the draft examination the opinion of Dr. Biggs in regard to the type of man to be temporarily rejected. He says, "It would greatly expediate the work of the Medical Corps if all cases of the following types were referred to a volunteer expert:

1. Every man whose history shows that at any previous time he had had any illness resembling pulmonary tuberculosis.
2. Every man who gives a history at any previous time of pneumonia or pleurisy.
3. Every man whose history shows that one or more members of his immediate family has had pulmonary tuberculosis or died of this disease.
4. Every man with a flat chest whose weight compared with his height is 15 per cent below normal.
5. Every man who gives a history of chronic catarrh or any symptoms of any disease in the chest.
6. Every man in whom any abnormal physical signs of any kind are found in the chest.
7. "We are of the opinion," says Dr. Biggs, "from our own experiences and interpretations of expert opinion in this matter, as well as from the experiences of the armies in Europe, that any man with even a very limited amount of pulmonary tuberculosis which is latent or arrested is almost certain to break down under the physical strain of military training and army life, and a focus of

disease previously latent or arrested will almost certainly become active.

Were we in our examinations to reject all men in whom one of the above conditions were found, we would be doing a great injustice. An injustice not only to the man who is anxious to do his part in time of need, but an injustice to the country that has a right to the services of every abled body individual enjoying its liberty and freedom in times of peace. We must not allow our enthusiasm to find tuberculosis get the better of our judgment, we must not allow our fear to be considered a poor diagnostitian to override our experience and medical knowledge. Let us but be careful and conscientious in our work of examining these men, and I am certain we, like Great Britain, will have no tuberculosis problem to deal with at the end of this war.

A CASE OF BILATERAL MELANOSIS OF THE EYEBALL AND FACE. Kestenbaum, Alfred. (From the eye clinic of Prof. F. Dimmer in the University of Wien. *Zeitschrift f. Aug.*, 34, p. 317). A woman, aged 68, showed an almost exactly symmetric melanosis of the lids, root of the nose, parts of the cheeks and temples to the hair border, the zygomatic arches, and the forehead above the eyebrows, more intense on the left side, where it was blackish grey, than on the right side, which had an ash grey color, besides numerous small brown or grey round naevi in the face. The melanosis extended to the lid border, became more intense at the posterior edge, and on the left side spread into the conjunctiva. The left lower fornix contained 3 dark brown folds in its whole length. The upper ocular conjunctiva was opaque from brown pigment dots. Most striking was the discoloration of the left sclera, encircling the cornea as an almost closed ring, partly 1 cm., partly $\frac{1}{2}$ cm. wide. It was bluish almost like a staphyloma. At some places the intense brown color shone through. At the nasal and temporal sides the ring consisted of yellowish brown confluent spots. On the nasal side of the right cornea a large number of brown spots was visible, on the temporal side the discoloration was slightly bluish. Upward a uniform blue area extended to the equator. No pigmentation could be noticed in the cornea.

The iris of both eyes was very dark brown, the left more than the right, and the fundus, especially the left, was intensely pigmented, but not the discs.

The hair of the patient was dark brunette. She stated that her father had dark brunette hair and her mother black hair, and both had very dark eyes. The excess of pigmentation seems to have been a consequence of summation of hereditary tendencies acting in the same sense. The incident literature is discussed.

C. Z.

CLASSIFICATION OF THE CHRONIC HIGH BLOOD-PRESSURE CASES.

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There is no subject in medicine which, in the present age, has more vital interest to physicians than that of the chronic diseases of the circulatory system. Figures in all vital statistics have shown us that all affections of the circulatory and renal systems are definitely on the increase. "Arterial diseases of various kinds, atheroma, aneurysm, etc., caused 15,685 deaths in 1915, or 23.3 per 100,000. This rate, although somewhat lower than the corresponding ones for 1912 and 1913, is higher than that for 1914, and is very much higher than that for 1900, which was 6.1."¹ True, the average length of life has been considerably prolonged in the past twenty-five years, yet it is not due to a decrease in the incidence of these chronic diseases. We are not absolutely certain yet of the causes which are concerned in the increase of the chronic affections of the circulatory and renal systems, but our modern life, with its stress and strain, its mental concentration and overindulgence in protein food, must have some large part in the production of these diseases.

The study of the cardiovascular system has been greatly advanced by the introduction of instruments of precision which measure the blood-pressure, record the radial pulse, the venous pulse, the venous pressure, and record on photographic paper or film the electrical variations of the parts of the heart. Again, the introduction of various tests to measure the functional capacity of the kidneys has added immensely to our knowledge of various kidney diseases, and has been of great help in prognosis. To keep pace with the advances in these closely allied branches of medicine taxes the time and energy of any man. All that we can hope to do is to gather together a few of the generalizations and apply them as best we can to our daily work.

Blood-pressure as an aid to diagnosis has been badly used and much abused. Some have even expected the instrument to name the diagnosis, and when it, unlike Balaam's ass, was silent the

¹United States Mortality Statistics for 1915.

instrument was blamed and discarded as worthless. Such an attitude is puerile. It is largely the result of taking only systolic pressure and neglecting the important diastolic and pulse-pressure. Happily this conception of blood-pressure is now undergoing a change, and we confidently expect to find that much help in diagnosis and prognosis will be given by careful blood-pressure estimations.

Five so-called phases have been described in the auscultatory blood-pressure phenomenon.² The systolic pressure is read at the beginning of the first phase and the diastolic, as I have shown,³ is read at the sudden transition from the third to the fourth phase, or where the loud third sound suddenly becomes dulled. From there to the fifth phase, that is, no sound, is usually only from 4 to 6 mm. For those who find difficulty in determining the sudden transition of sound the fifth phase may be used. Hooker and Southworth⁴ conclude from their observations that for clinical purposes the diastolic pressure may be taken at the disappearance of all sounds (the fifth phase). I have called attention, however, to the fact that in cases of aortic insufficiency there is no fifth phase, that is, the fourth phase or dull tone is heard over the uncompressed artery, hence one could not use the point of disappearance of sound to determine diastolic pressure. Must one then conclude that there is no diastolic pressure in aortic insufficiency? That would be absurd. One can easily obtain the diastolic pressure by taking the sudden transition of third into fourth phase. As a matter of fact, except in cases of aortic insufficiency, one may use the fifth phase to determine the diastolic pressure. It must, however, be remembered that there is an error of 4 to 6 mm. normally and up to 16 mm. in high-pressure cases.⁵

In an irregular heart, especially in the cases due to myocardial disease, it is quite impossible to determine the true diastolic pressure. One can only approximate it and say that the pulse-pressure is low or high. As a matter of fact the real systolic pressure cannot be determined. For this figure the place on the scale where most of the beats are heard may be taken for the average systolic pres-

sure. No one can seriously maintain that he can measure the diastolic pressure under all circumstances.

By means of the auscultatory method of measuring blood-pressure we are able to determine irregularities of force in the heart beats more easily than by listening to the heart sounds. A pulsus alternans is readily made out. The irregular tones heard over the brachial artery in cases of irregular heart action have been called "tonal arrhythmias."⁶

There are three parts to every blood-pressure estimation: the systolic, the diastolic, and the pulse-pressure. These I have called the pressure picture.⁷ To these should be added the pulse-rate in order to make the reading complete. Obviously, to say that the systolic pressure is 140, 160, or 200 mm. Hg. conveys to more knowledge of what the heart is doing than a count of red cells alone determines the kind of anemia. We have long known that a great variety of influences modifies the systolic pressure. Some of the influences are psychic and are entirely beyond our or the patient's control. Some apparently trivial circumstances, a chance remark made to the patient, an occurrence earlier in the day the memory of which flashed through his mind, may and does increase the systolic pressure 20 mm. or more above the average normal for the person. The systolic pressure measures the total work of the heart at the moment when it is tested. In a few minutes it may be higher or lower. A pathological or, rather a compensatory high systolic pressure is always high, but the height is subject to great variation which makes it unwise to attribute a drop in pressure to any therapeutic measure.

The diastolic pressure measures the peripheral resistance. It measures the work of the heart, the potential energy,⁸ up to the moment of the opening of the aortic valves. It is the actual pressure in the aorta. The diastolic pressure is not very variable: it is not subject to the same influences which disturb the systolic pressure. It fluctuates, as a rule, within a small range. It is not affected by diet, by mental excitement, by subconscious psychic influences, to anything like the extent to which the systolic pressure is affected by the action of these factors. The diastolic pressure is deter-

²Korotkov: Mitt. d. k. mil. med. Akad. zu St. Petersburg, 1905, xi, 365.

³Warfield, L. M.: Arch. Int. Med., 1912, x, 258.

⁴Arch. Int. Med., 1914, xiii, 384.

⁵Warfield, L. M.: Jour. Am. Med. Assn., 1913, lxi, 1254.

⁶Goodman and Howell: Am. Jour. Med. Sc., 1911, cxlii, 324.

⁷Warfield, L. M.: Ibid., 1914, cxlviii, 880.

⁸Stone, W. J.: Arch. Int. Med., 1915, xvi, 775.

mined by the tone in the arterioles and is under the control of the vasomotor sympathetic system. Any agent which causes chronic irritation of the whole vasomotor system produces increase in the peripheral resistance with consequent rise in the diastolic pressure. Any agent which acts to produce thickening of the walls of the arterioles, narrowing their lumina, produces the same effect.

Such states naturally result in increased work on the part of the heart, which, as a result, hypertrophies in the left ventricle. The increase in size and strength is a compensatory process in order to keep the tissues supplied with their requisite quota of blood. Conversely, paralysis of the vasomotor system produces fall of diastolic pressure which, if long continued, results in death.

The diastolic pressure then is of importance for the following reasons:

1. It measures peripheral resistance.
2. It is the measure of the tonus of the vasomotor system.
3. It is one of the points to determine pulse-pressure.
4. Pulse-pressure measures the actual driving force, the kinetic energy of the heart.
5. It enables us to judge of the volume output, for pulse-pressure (PP) \times pulse-rate (PR) = volume output in most instances.
6. It is more stable than the systolic pressure, subject to fewer more or less unknown influences.
7. It is increased by exercise.
8. It is increased by conditions which increase peripheral resistance.
9. The gradual increase of diastolic pressure means harder work for the heart to supply the parts of the body with blood.
10. Increased diastolic pressure is always accompanied by increased pulse-pressure and increased size of the left ventricle, temporarily (exercise) or permanently.
11. Decreased diastolic pressure goes hand in hand with vasomotor relaxation, as in fevers, etc.
12. Low diastolic pressure is frequently pathognomonic of aortic insufficiency.
13. When the systolic and diastolic pressures

approach, heart failure is imminent either when pressure picture is high or low.

Pulse-pressure measures the actual head of pressure which maintains the circulation, the force driving the blood to the periphery. As the circulatory bed widens the pulse-pressure diminishes until at the capillaries it is only about 5 mm. Hg.

When all these factors are taken into consideration it becomes apparent that the diastolic pressure is most important, if not the most important, part of the pressure picture. I am not unaware of the value of the great mass of statistical evidence which shows the bad prognosis import of high systolic pressure alone. One could show by the red cell count alone the seriousness of the low count, but one would fail to differentiate types of anemia and be unable to offer really valuable evidences of the gravity of anemia. So while conclusions drawn from statistics of high systolic pressure are in general correct, there is necessarily much that is incorrect and grossly misleading in them. I feel that only when we study our cases with the whole pressure pictures before us will we be able to draw really valuable conclusions for everyday use.

Figures for the normal pressure picture vary somewhat with sex and age. In adults we may safely assume that a systolic pressure which is constantly over 150 mm. Hg. is abnormal; a diastolic constantly over 90 is abnormal and a pulse-pressure over 50 mm. is an increased pressure.

Normally the pulse-pressure varies from 30 or under, low to 50 or above, high. We have found that in all of the cases of high pulse-pressure the left ventricle was dilated—it actually held more blood than a normal ventricle holds. The arch of the aorta was also dilated, easily revealed by auscultating over the manubrium,⁹ and the seat of a definite sclerosis which rendered it less capable of expansion when the blood from the left ventricle was thrown into it at systole. The sequence of events conjecturally is as follows: There is arteriosclerosis of the aorta (usually the nodular), diffuse thickening of the walls of the large arteries, also some concomitant fibrous change in the myocardium. The elasticity of the aorta is reduced, hence the evenly distributed force which normally keeps the blood moving between systoles is absent. In order for the circulation to be carried on out to the extreme periphery, so that all the organs

⁹Warfield, L. M.: Jour. Am. Med. Assn., 1917, lxviii, 824.

receive blood, more blood must be thrown at each systole into the aorta. The force also must be greater because the distributing tubes are no longer capable of doing their full share in maintaining the circulation in equilibrium. This not only causes hypertrophy of the left ventricle but actual increase of size of the cavity of the ventricle in order to accommodate the added amount of blood which must be put out at systole. As a result the left ventricle hypertrophies and dilates. The pathological process which is present in the myocardium by its very nature tends to increase gradually. More muscle fibers are destroyed, more dilatation supervenes, more compensatory hypertrophy of the remaining fibers takes place. A vicious circle thus becomes established until finally the heart loses the power of carrying on the circulation and decompensation sets in. While we cannot prove this sequence absolutely, we believe that our clinical studies and our pathological studies make it more than probable that events occur in the order in which they have been related.

Again, the diastolic pressure, the peripheral resistance, does not rise in these cases above 110 mm. Usually it is between 90 and 100 mm. The systolic rarely goes above 200 mm. The pulse-pressure then may be from 80 to 110 mm. The larger the pulse-pressure the greater the cavity of the left ventricle and the more dilated is the arch of the aorta.

Stone¹⁰ has divided the cases of hypertension into the cerebral and cardiac types. He finds there is a difference in prognosis and in mode of death in the two groups. He thinks that the pressure-ratio (heart load) which he has made use of will enable one to determine the type of case. I cannot say that I have found his method applicable except to a very few cases, although I agree with him in his contention that such a separation of cases is possible. I have felt the need of a better classification of the cases of chronic hyper-tension. For the past few years the cases have been critically studied, and it is believed that Stone's first group is composed of two groups, in general usually differentiable. I should therefore propose a classification into three groups. Syphilis is not an etiological factor in these cases. It is not contended that these groups are absolutely distinct. There are variations and combinations which render an

exact separation into groups impossible. Bearing this in mind the following classification of the chronic high blood-pressure cases is submitted.

GROUP A. Chronic Nephritis. These are the cases with a high-pressure picture, that is to say, high systolic (200+) and high diastolic (120-140+). The pulse-pressure is much increased. The palpable arteries are hard and fibrous. There is puffiness of the under eyelids, which is more pronounced in the morning on arising. Poluria with low specific gravity and nycturia are present. There are almost constant traces of albumin in the urine, with hyaline and finely granular casts.

Functionally these kidneys are much under normal. The functional capacity determined by Mosenthal's modification of the Schlayer-Hedinger method shows a marked inability to concentrate salts and nitrogen. The phthalein output is below normal. As the case advances the phthalein output becomes less and less until a period is reached when there are only traces or complete suppression at the end of a two-hour period. Such patients may live for ten weeks (one of our cases), all the time showing mild uremic symptoms, and suddenly pass into coma and die.

The natural end of patients in this group is either uremia or cardiac decompensation (so-called cardiorenal disease). Cerebral accidents may happen to a small number. It is only to this group, in my opinion, that the term cardiorenal disease should be applied. Formerly I believed that all high systolic pressure cases were cases of chronic nephritis of some definite degree. From the purely pathological stand-point that is true, but from the real, the functional stand-point, it is far from being the true state of the cases.

In this group there is marked hypertrophy and moderate dilatation of the left ventricle with dilatation and nodular sclerosis of the aorta. The kidneys are firm, red, small, coarsely granular, the cortex much reduced, the capsule adherent. Cysts are common. It is the familiar primary contracted kidney. Mallory calls this capsular-glomerulonephritis. The etiology is obscure. Often no cause can be found. Again, there is a history of some kidney involvement following one of the acute infectious diseases, or it may follow the nephritis of pregnancy. Usually, however, these cases fall into the group of secondary contracted kidneys, chronic parenchymatous nephritis.

¹⁰Loc. cit.

CASE I.—R. Z., a woman, aged thirty-six years, was seen July 26, 1916, in coma. There was a history of typhoid fever at nineteen years, but no other disease. She had nine full-term pregnancies, the last one thirteen months previously. For a week before the onset of the present illness she had complained of severe headaches and dizziness. There were no heart symptoms. For the past year she has had nycturia. Physical examination revealed tubular breathing beneath the manubrium, a few rales in the chest, an enlarged heart (left side), with a systolic murmur over the aortic area. Blood-pressure was 178-125-53, the pulse-rate 96, leukocytes 27,250. Venesection of 500 c.c. of blood and intravenous injections of 500 c.c. of 5 per cent. NaHCO_3 in normal saline were employed. Lumbar puncture withdrew 60 c.c. of clear fluid under pressure with 6 cells per cubic millimeter. The eye-grounds showed distinct haziness of the disks and dilation of the veins. Blood-pressure after venesection was 164-122-42, pulse 76, but in a few days rose to 222-142-80, pulse 70. A second venesection of 400 c.c. and proctoclysis of 1000 c.c. saline solution was tried. The blood-pressure now was 198-140-58. The pH of the blood was 7.6, the alkaline reserve was 35 volume per cent. (van Slyke), and the CO_2 tension of the alveolar air (Marriott) was 25 mm. The phthalein on the day following the second venesection was 45 per cent. in two hours. The urine as first showed 500 c.c. in twenty-four hours, specific gravity 1016, albumin and casts. Later she passed 1300 to 1600 c.c., with specific gravity around 1010. The blood-pressure fluctuated considerably, reaching as low as 138-98-40, pulse 88. She was discharged improved September 10, 1916. At present (March, 1917) she is doing all her housework, but occasionally has headaches and attacks of dizziness.

GROUP B. This one might designate as the hereditary type, although there is not always a history in the antecedent. This group includes the robust, florid, exuberantly healthy people. They often are heard to boast that they have never had a doctor in their lives. They are usually thick-set or very large, fleshy people. The pressure picture is exceedingly high. The pulse-pressure is moderately increased. The arteries are rather large, fibrous, and often quite tortuous, although this is not always the case. Some persons have hard, small fibrous arteries. There is no puffiness be-

neath the eyes, no polyuria, and no nycturia as a rule. The urine is of normal amount, color, and specific gravity. Albumin is only rarely found and then in traces, but careful search of a centrifuged specimen invariably reveals a few hyaline casts. The phthalein excretion is normal or only slightly reduced. The kidneys excrete salt and nitrogen normally. It is in this group that apoplexy is found most frequently. The rupture of the vessel occurs when the victim is in perfect health, often without any warning. Occasionally when such a case recovers sufficiently to be around, cardiac decompensation sets in later and he dies then of the cardiac complications.

Pathologically the hearts of such persons are found to have the most enormous hypertrophy of the wall of the left ventricle. The cavity is increased, but the size of the cavity is not the striking feature. The aorta is fibrous, thick walled, and the arch is slightly dilated. There are patches of the wall of the left ventricle. The cavity is somewhat enlarged, as is always the case when the pulse-pressure is increased, but the size of the cavity is not the striking feature. The aorta is fibrous, thick walled, and the arch is slightly dilated. There are patches of arterosclerosis. One such case seen only at autopsy had a rupture of the aorta just above the sinus of Valsalva and died of hemopericardium. The kidneys are of normal size, dark red, firm, the glomeruli are a trifle thickened; a few show hyaline changes. There is rather diffuse, mild, round-cell infiltration between the tubules. The tubular epithelium shows little or no demonstrable changes. The arterioles are generally the seat of a moderate thickening of the intima and media, but it is not usual to find obliterating endarteritis. There is evidently a diffuse fibrous change which has not affected either the tubules or glomeruli to any great extent.

CASE II.—L. C., a man, aged fifty-six years, stonemason by trade, is a stocky, thick neck individual. He has never been ill in his life until a year ago, when he fell from his chair unconscious. He had a right-sided hemiplegia which has cleared up so completely that except for a very slight drag to his foot he walks perfectly well. He came in complaining of shortness of breath and cough. There was no swelling of the feet. Here evidently was left-heart decompensation. Examination

showed the blood-pressure to be 240-130, pulse irregular, 104 to the minute. There was cyanosis and rales throughout both chests. The urine was normal in color, specific gravity 1025, small amount of albumin, few casts, hyaline and granular. The phthalein elimination was 65 per cent. in two hours. Under rest, purgatives, and digitalis he was much improved. He has since had two other apoplectic strokes, the last of which was fatal.

When these patients are seen with acute cardiac decompensation there is, of course, much albumin and many casts in the urine, and the phthalein output is, for the time being, decreased.

GROUP C. This might be called the arterio-sclerotic high-tension group. The cases are usually over fifty years old. They are men and women who have lived high and thought hard. Often they have had periods of great mental strain. Many men in this group were athletes in their young manhood. Many have been fairly heavy drinkers, although never drinking to excess. They are usually well nourished and inclined to stoutness. The pressure picture is high systolic with normal or only slightly increased diastolic and large pulse-pressure. The arteries are large, full, fibrous, usually tortuous. The heart is very large, the apex far down and out. There is no polyuria; nycturia is uncommon, quite the exception. The urine is normal in color, amount, and specific gravity. Albumin is only rarely found and hyaline casts are not invariably present. The phthalein excretion is quite normal and the excretion of salt and nitrogen are also normal. The terminal condition in most of the patients in this group is cardiac decompensation. They may have several attacks from which they recover, but after every attack the succeeding one is produced by less exertion than the preceding one, and it becomes more and more difficult to control attacks. Eventually the patients become bed- or chair-ridden, and finally die of acute dilatation of the heart.

Occasionally patients in this group may have a cerebral attack, but in my experience this is uncommon. Pathologically the heart is large, at times true *cor bovinum*, dilated and hypertrophied. The cavity of the left ventricle is much dilated. The aorta is dilated and sclerosed.

The kidneys are increased in size, are firm, dark red in color, with fatty streaks in the cortex. The capsule strips readily and the cortex is normal in

thickness or only slightly increased. The organ offers some resistance to the knife. The microscope shows small areas scattered throughout where the glomeruli are hyalinized, the stroma full of small round cells, the tubules dilated, and the cells are almost bare of protoplasm. Naturally the tubules are full of granular cast material. Also the arterioles show extensive intimal thickening, fibrous in character, with occasional obliterating endarteritis. One gets the impression that the small sclerotic lesions are the result of anemia and gradual replacement of scattered glomeruli by fibrous tissue. For the most part the kidney, except for the chronic passive congestion, appears quite normal. One can readily understand that in such a kidney function could not have been interfered with.

CASE III.—C. K., an active, stout, business man, aged fifty-six years, consulted me on account of shortness of breath and swelling of the feet in May, 1915. He had just returned from a hospital in another city, where he had gone with what was apparently cardiac decompensation. In his early manhood he had been a gymnast and was a prize winner. He has worked hard, often given way to violent paroxysms of temper, has eaten heavily but drunk very moderately. The heart was greatly enlarged, the arch of the aorta dilated, a mitral murmur was audible at the apex. The radials and temporals were large, tortuous, and fibrous. The blood-pressure picture ranged around 180-90-90. He was easily made dyspneic and had a tendency to swelling of the lower legs. The urine was acid, of normal specific gravity, normal in amount, normal phthalein, normal concentration of salt and nitrogen, contained albumin only when he was suffering from decompensation of the heart. Casts were always found. He finally died, after sixteen months, with all the symptoms of chronic myocardial insufficiency. The heart was enormous, a true *cor bovinum*. The kidneys were typical of this condition, possibly somewhat larger than usual.

The management of these groups of patients presents many difficulties. I believe that all these excessive pressures are compensatory. As has been said before, the systolic pressure is subject to considerable variation, but the diastolic remains fairly constant. Unless one can reduce the whole pressure picture therapy is useless. This reduction is

far from being easy to accomplish. Occasionally one sees cases, such as two we have seen, in which there was uremia, high-pressure picture, almost total phthalein suppression. Eventually there was complete recovery, with normal pressure pictures. Such cases are the exceptions and are probably acutely toxic in origin. The chronic, slowly progressive cases do not act thus. The best we can do is to make searching inquiries into the mode of life and regulate it on a rational basis. All people of the three groups need regulation of habits and diet. We have not found drugs of value, with the possible exception of bichloride of mercury and potassium iodide. Even in the positive absence of syphilis these drugs in combination seem to exert a favorable influence on the factors which are causing the high pressure. Electricity in the form of the static current, the high-frequency current, and other forms are recommended. All aid in maintaining nutrition and hygiene, but in my experience have no permanent effect upon this class of cases which other measures do not have.

Naturally when decompensation sets in it is to be treated as it usually is in spite of the high systolic and high diastolic pressure. As a matter of fact I have seen the pressure picture reduced when compensation was restored under digitalis, and it is generally recognized that such is the case. Personally I believe that hydrotherapy, attention to the bowels, regular hours, great decrease in food, limitation of meats, especially purin base-containing meat products, substitution of butter-milk and cheese in the diet, are the chief means at our disposal for regulating the lives of those who fall into our hands before accidents have happened. But I realize that we have no means of actually preventing a cerebral hemorrhage, although we have some control over the development of a cardiac breakdown.

Finally, this grouping is of interest in respect to prognosis. Careful examination of the patient should enable us to predict with some degree of accuracy what will happen to him. We may be able to modify somewhat the course, and, in general, we can render a fairly correct prognosis. This is certainly of value to the patient's family as well as to the patient.

CONCLUSIONS. 1. In a blood-pressure reading the whole record should be taken, systolic, diastolic, pulse-pressure, and pulse-rate. The

pressure picture is the term suggested for the figures representing the component parts of the blood-pressure reading.

2. The diastolic and pulse-pressure give us more information than the systolic pressure.

3. There are three groups of high-pressure cases, called (A) chronic interstitial nephritis, (B) hereditary or cerebral type, (C) arteriosclerotic or cardiac type. Causes of death are usually anemia in group A, cerebral hemorrhage in group B, and cardiac decompensation in group C.

4. The term cardiorenal disease should be reserved for the cases of group A, which suffer from cardiac decompensation; the term hypertensive cardiovascular disease for cases of group B. Myocardial insufficiency covers most of the cases in group C.

5. Prognosis is much more intelligently given when this grouping of cases is followed.

ABSTRACTS

ON A CASE OF LACERATION OF THE DISC BY RIFLE SHOT. Birch-Hirschfeld, A., Koenigsberg, (*Zeitschrift f. Aug.*, 34, p. 289). A soldier, aged 28, was injured by a rifle shot on August 3, 1915. He was unconscious for quite a time, and after recovery noticed that his right eye was blind. On admission November 26, 1915, B. found a scar of the wound of entrance in the middle of the forehead above the root of the nose, and the place of exit on the right side of the neck in the middle point between the right inframaxillary angle and the insertion of the sternocleidomastoid muscle. The right eye and its surroundings showed no external changes. It deviated a little outward, the pupil was enlarged and reacted slightly to light. The motility upward and downward and inward was somewhat impeded. V. fingers at 1 m. eccentrically, visual field reduced to a small irregular area at the nasal side of the point of fixation.

As the vitreous was only slightly opaque, a good ophthalmoscopic view was obtained. The disc appeared to be vertically separated into 2 parts. Both parts had a reddish color, and from each numerous arteries and veins emerged, which could be traced far into the retina. The separating surface was covered by a greyish white new formation, projecting into the vitreous, which by a prominence at the nasal side of the disc was connected with a narrow scar of the chorioid, and spread, growing larger, over the macular region. Here it was merged into an extensive chorioretinitic focus with pigment displacements and greyish white patches. The same focus communicated with a chorioidal scar encircling the

nasal side of the disc and sending a wide process downward and outward. The temporal portion of the retina showed a flat detachment.

B. diagnosed an oblique laceration of the optic disc and a gaping wound of the sclera, which probably was at first filled with blood and later after its organization with new formed glia and connective tissue. It was peculiar that the torn optic nerve did not become totally atrophic and that the stem of the central artery was not severed. If this had been the case, neither the preservation of a small area of the visual field nor the good color of the disc could be explained. The new formation projecting into the vitreous resembled analogous phenomena that happen after evulsion of the disc and were observed and described by the author in a case of evulsion of the optic nerve.

The condition had not changed after 6 weeks. B. does not expect this in the future, as 4 months had elapsed after the injury. C. Z.

RECONSTRUCTION HOSPITALS AND ORTHOPEDIC SURGERY.

The Surgeon General of the Army, Major General William C. Gorgas, authorizes the publication of the statement that the whole conception of governmental and national responsibility for caring for the wounded has undergone radical change during the months of study given the subject by experts serving with the Medical Officers' Reserve Corps and others consulting with them. Instead of the old idea that responsibility ended with the return of the soldier to private life with his wounds healed and such pension as he might be given, it is now considered that it is the duty of the government to equip and re-educate the wounded man, after healing his wounds, and to return him to civil life ready to be as useful to himself and his country as possible.

To carry out this idea plans are well under way for building "reconstruction hospitals" in large centers of population. Sites have been chosen, though not all finally approved, in the following cities: Boston, New York, Philadelphia, Baltimore, Washington, Buffalo, Cincinnati, Chicago, St. Paul, Seattle, San Francisco, Los Angeles, Denver, Kansas City, St. Louis, Memphis, Richmond, Atlanta, and New Orleans. Those in Boston, New York, Washington, and Chicago will probably be constructed first. Each will be built as a 500-bed hospital, but with provision for enlargement to 1,000 beds if needed.

These hospitals will not be the last step in the return of the wounded soldiers to civil life. When the soldiers are able to take up industrial training, further provision will be ready. The injured man may be retrained to his previous occupation to conform with his handicapped condition or retrained for a new industry compatible with that condition. Additional education will be given to those fitted for it, and men may in some cases be returned to more valuable work than that from which they

were called to war. Workshops will be provided at the hospitals, but arrangements will also be made with outside industries whereby more elaborate methods of training may be carried on. An employment bureau will be established to place men so trained in different parts of the United States.

This whole matter comes under the department of military orthopedic surgery recently organized in the Medical Department of the Army. The following officers of the Medical Reserve Corps are in charge of the work: Major Elliott G. Brackett, of Boston, director of the department of military orthopedics to the Surgeon General; Major Joel E. Goldthwait, of Boston, director of military orthopedics for the expeditionary forces; Major David Silver, of Pittsburgh, assistant director of military orthopedics to the Surgeon General. The following, in conjunction with the above staff, compose the orthopedic council: Dr. Fred H. Albee, of New York; Dr. G. Gwilym Davis, of Philadelphia; Dr. Albert H. Freiberg, of Cincinnati; Dr. Robert W. Lovett, of Boston; and Dr. John L. Porter, of Chicago.

Arrangements have been made by the department of military orthopedics to care for soldiers, so far as orthopedics (the prevention of deformity) is concerned, continuously until they are returned either to active service or civil life. Orthopedic surgeons will be attached to the medical force near the firing line and to the different hospitals back to the base orthopedic hospital, which will be established within 100 miles of the firing line. In this hospital, in addition to orthopedic surgical care, there will be equipment for surgical reconstruction work and "curative workshops" in which men will acquire ability to use injured members while doing work interesting and useful in itself. This method has supplanted the old and tiresome one of prescribing a set of motions for a man to go through with no other purpose than to reacquire use of his injured part.

In addition to the American orthopedic surgeons now working abroad under Col. Jones, of England, others will soon go overseas. Experienced surgeons, and a large number of younger surgeons who will work under competent directors, will go abroad for this work, all to be under the direction of Major Goldthwait. These orthopedic surgeons will work in England among the British force and when needed will be transferred to France to work among American soldiers.

It is not the intention that men able to go back to the firing line shall be returned to this country unless their convalescence will extend over a period of a considerable number of months. Soldiers unable to return to duty will be sent to the reconstruction hospitals in the United States.

Instructors and examiners for all the camps are also being furnished by the department of military orthopedic surgery. A number of older and more experienced surgeons will act as instructors and supervisors for each of the groups into which the camps will be divided; a number of orthopedic surgeons will be detailed as attending surgeons at each camp to act as examiners and as consultants to the camp's other surgeons.

THE WISCONSIN MEDICAL JOURNAL

OFFICIAL PUBLICATION OF THE STATE MEDICAL SOCIETY OF WISCONSIN

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Annual Subscription - - - Two Dollars Single Copies - - - Twenty-five Cents

Address all business communications to THE WISCONSIN MEDICAL JOURNAL, 504 Goldsmith Building, Milwaukee

Vol. XVI.

November, 1917

No. 6



DR. G. WINDERSHEIM

EDITORIALS

THE ANNUAL ELECTION.

AT the last annual meeting held recently, the Society honored itself by electing as its president for the ensuing year, Dr. G. Windersheim of Kenosha. It is unnecessary to introduce our new president to the members of the Society. If we say that he has been an old war horse in the service of the Society, we do not mean anything disrespectful. On the contrary, we wish to convey the impression that Dr. Windersheim has ever been at the service of the Society, putting his best into everything that he did for its members, giving of his time freely, and always being a firm rock-ribbed anchor in all questions that arose in regard to the best interests of the Society. It is fortunate indeed that we have such men to elect to the presidency. Dr. Windersheim was born at Barr, Alsace, on June 6, 1854, came to this country in 1873, and has lived in Kenosha for 25 years. He has been active as the health officer of that community and has done much to forward the science of preventive medicine. We feel that we voice the sentiments of the whole Society when we say that we wish Dr. Windersheim a successful year under his incumbency and we pledge ourselves on our part to give him loyal assistance.

The Society also elected Dr. Oscar Lotz, Milwaukee, as vice-president; Dr. T. W. Nuzum, Janesville, second vice-president; Dr. Carl Doege, Marshfield, third vice-president. In the discussion in the House of Delegates as to whether or not a member serving in the army should hold his position as councillor, it was unanimously agreed that he should be re-elected, that this honor from the Society should not be taken from him while he is in the service of his country. Dr. M. R. Wilkinson was therefore re-elected councillor of the first district; Dr. G. Windersheim was re-elected for the second district; Dr. Joseph Smith, Wausau, was elected in the ninth district to fill the unexpired term of Dr. T. H. Hay; Dr. Windersheim was re-elected to the annual legislative council; Dr. L. M. Warfield, Milwaukee, was elected delegate to the Council of Medical Education; Dr. Spencer Beebe, Sparta, was elected member of Committee on Public Health and Instruction in place of Dr. Zierath, Sheboygan.

There was a discussion in the House of Dele-

gates in regard to the question of collecting the history of Wisconsin medicine as exemplified in the lives of its prominent men. A committee of Historical Research was appointed consisting of Dr. H. E. Dearholt, Milwaukee, Dr. J. Redelings, Marinette, Dr. H. M. Brown, Milwaukee, Dr. S. S. Hall, Ripon, Dr. C. R. Bardeen, Madison. There was also considerable discussion about the advisability of continuing the Medical Defense. This is a question that comes up every year in the House of Delegates and is from time to time commented upon editorially in the Journal. Medical Defense is a very expensive item in the Society's budget, and it is a grave question whether this money could not better be employed in financing a more useful cause by the Society.

A committee was appointed to investigate and report upon the whole subject of Medical Defense, at the next meeting of the State Society. This committee is: Drs. L. F. Jermain, Milwaukee; A. J. Gilbert, Madison; Joseph Smith, Wausau, F. P. Knauff, Kiel. Up to the present time the place of meeting has not been definitely decided. It has been customary to meet every second year in Milwaukee. Many of the members feel that the meeting should be yearly in Milwaukee. As with our present registration of 500 to 600, there is no city in the state other than Milwaukee with sufficient accommodations to take care of such a convention. Wherever the meeting is, we may be sure that it will be up to the standard of previous meetings, and judging by this last meeting, the standard is set at a high point.

YOUNG PHYSICIANS, YOUR OPPORTUNITY.

NEVER again in the history of medicine in this country will such an opportunity be afforded you to serve your country as well as the best interest of yourself.

The experience which you will gain by being commissioned in the Medical Reserve Corps and seeing active service, will be worth more to you in a professional way than you could acquire in years of practice in civil life.

The pay granted to officers in the Medical Reserve Corps is sufficient not only to cover all needs, but enable you to lay aside a comfortable balance, and while the older men in the profession have

come forward, it is to the younger men that the greatest benefits accrue.

The experience will prove broadening both professionally and mentally. With this experience and the thought that you have served your country in time of need, you will return to civil life and receive the further benefits from your patients, friends and acquaintances, always accorded to one who has been so prominently individualized as this opportunity will afford you.—*Ex.*

THE DOCTOR'S CONTRIBUTION.

IN this world's war, your service is absolutely essential.

The medical officer bears the same relative position in war as in peace in that he is a conservator of health and life.

Through his skill, thousands of men receiving slight casualties, are returned to the fighting force, thus conserving the physical strength of the army.

In Base, Field and Evacuation hospitals, doctors are as essential as in civil institutions, where the sick and injured are cared for.

As regimental surgeons and on transports and in the Sanitary Corps, must the Government have doctors if we are to terminate this war successfully.

Your contribution to your country at this critical time is *your service* which you can give for the period of the war as an officer in the Medical Reserve Corps. That your country needs you, is best answered in that she is calling you *now*.

The fighting forces are constantly expanding and such expansion calls for additional doctors and even with the troops now in training and under mobilization (about two million) the Surgeon General has not enough doctors to fill the requirements.

Secure an application blank at once; fill it out and present it to your nearest Examining Board. Do not live to regret that you did not have a part in your country's great struggle for democracy which means *Liberty*.—*Ex.*

THE PROFESSION COMES FORWARD.

IT is most gratifying to us all to learn that there are at present about 14,000 doctors commissioned in the M. O. R. C., and approximately 4,000 whose applications are in, making in

all about 18,000 who have responded to their country's call. There are still places for more doctors, so that we must not let this large figure deter us from offering our services if we can possibly do so.

With the many new activities that modern war has brought, there will be more and more room for trained physicians. The Medical Profession always has taken an active part in every great movement whether in peace or war. We do not feel that we would have the stigma of conceit cast upon us if we allowed ourselves the pleasure of some self-congratulations.

RECREATION IN THE CAMPS.

WE are in receipt of a little pamphlet outlining the plans of the Commission on Training Camp Activities. It is a tremendous undertaking. When one steps to consider the hundreds of thousands of active young men suddenly taken from their normal social surroundings and placed in an atmosphere where physical activity and health are at their maximum, one cannot wonder that such young animals have unlimited quantities of steam to work off during their furlough hours. To direct this enormous and natural energy is a Herculean task which the war department has tackled by the appointment of a Commission. The Y. M. C. A., the Knights of Columbus and the Library Associations have joined forces. Mr. Klaw of Klaw & Erlanger has charge of dramatic entertainments. Jim Corbett, "Kid" McCoy, and other pugilistic lights are in charge of boxing. It is said that boxing is one of the very best exercises that the men can take for it is a training in bayonet work. The skill in dodging, feinting and in agility, helps much to get the men these qualities in their bayonet training. Last but not least, and really greatest of all, is the intensive work being done in which civil communities are assisting to combat the venereal peril. Secretary Daniels said in a speech recently, that this is a question that we must face and it is a question that can no longer be tabooed in polite conversation. It is only the rankest sort of prudery which will refuse to take cognizance of the peril and help in every way to combat it. Altogether it does look as if our boys who were taken in the training camps will not only be fit for actual warfare, but their bodies will be returned to us as clean as when

they left us. If this can be done, it will be an accomplishment for which the United States can well be proud, for no country yet has been able to solve the problem.

ANTIMENINGOCOCCIC SERUM.

SINCE Flexner and his co-workers have demonstrated conclusively the efficacy of the antimeningococcic serum given intraspinously, there has been widespread use of the serum. Unfortunately there is no government standard for the antibody or agglutinin or bactericidal content and serums have been sold to the profession both here and in England which were absolutely inert.

Recent personal experiences with serum manufactured by a prominent firm showed absolute lack of any curative powers. This is truly an outrageous state of affairs. Meningitis of the epidemic type is a disease the mortality of which is close to 75 per cent. Under efficient treatment with serum the mortality has been reduced in a large series of cases to 25 per cent. Now what shall we say of a firm which sells to physicians serum which has lost its potency or possibly never had any potency.

It is not as easy to produce an active antitoxin against the meningococci as it is to produce the antitoxin against diphtheria. The meningococci are not readily cultured for any long period. They soon lose their virulence. There are also a number of types, all of which complicate the problem of manufacturing the antitoxin. That it can be done has been conclusively demonstrated. Government license and government supervision should be employed.

For us who see the cases of meningitis this matter of a potent antitoxin is a very serious question. There is only one antitoxin upon which we can absolutely rely, that is the antitoxin made at the Rockefeller Institute under Flexner's direction. But we can not get this always. We shall have to continue to use antitoxin made by others, trusting in the honesty of the manufacturers (for they know that the serums have not been potent) and hoping that the package we use contains active serum.

PATRIOTISM.

WE can say with Thomas Paine in one of his "Crisis" essays, "These are the times that try men's souls". We are losing our grip on ourselves as a nation. We are letting "lip patriots" move us to acts of foolishness or to acts which we may regret in our sober moments. Truly patriotism is prostituted in the hands and minds of some people.

As we conceive patriotism it is not insistence on the playing of the Star Spangled Banner on every musical program; it is not the flaunting the flag in the face of every passer-by; it is not howling about our dear country and possibly sneaking around to boost the price of flour or bacon; it is not a spirit of intolerance to one whose opinion on all matters is not the same as that of the wrought-up majority; it does not express itself in forcing a man to kiss the flag, or to beat up a man who may have expressed an opinion contrary to the majority's. No; patriotism is not of the lip, it is of the heart, the soul, the very fibre of one's being. Patriotism cannot be forced down a man's throat, he has to grow into it by feeling that his country has been fair to him.

We must not lose sight of the fact that much talk of patriotism on the part of some is but camouflage to conceal actions which are unpatriotic. So we deprecate the spirit of intolerance which is abroad in the land. We protest that patriotism does not consist in a constant repetition of spell-binding. This world's work has ever been actually done by the men and women who did not have time to tell everyone day in and day out how much they were doing. So we suspect that the man who so constantly cries out his patriotism is the one who bears watching. The true patriot serves with his body and mind, not with his voice alone.

TO OFFICERS OF THE MEDICAL RESERVE CORPS, U. S. ARMY INACTIVE LIST.

WORD RECEIVED FROM THE SURGEON GENERAL OF THE U. S. ARMY, CONVEYS THE INFORMATION TO OFFICERS OF THE MEDICAL RESERVE CORPS OF THE UNITED STATES ARMY, INACTIVE LIST, THAT ASSIGNMENT TO ACTIVE DUTY

MAY BE DELAYED, AND THAT THEY ARE ADVISED TO CONTINUE THEIR CIVILIAN ACTIVITIES, PENDING RECEIPT OF ORDERS. THEY WILL BE GIVEN AT LEAST 15 DAYS NOTICE WHEN SERVICES ARE REQUIRED.

TO MILITARY PHYSICIANS.

If you desire *The Journal* forwarded to you, please advise this office promptly of your new address. State your military address in detail, giving division and regiment and company to which you are attached. *The Journal* may be forwarded without extra charge to foreign points as well as American camps. Address a post card to

THE WISCONSIN STATE MEDICAL JOURNAL,
141 Wisconsin St., Milwaukee.

CORRESPONDENCE

Madison, Wis.

DEAR DOCTOR:

Your attention is called to the laws passed by the 1917 legislature requiring all applicants for marriage license to have a certificate of health from a physician, and the reporting of all cases of venereal diseases. These laws provide that if in the opinion of the examining physician a laboratory test is required to clear up any suspicion concerning the diagnosis of gonorrhea that the laboratory examination shall be made free of charge by the State Laboratory of Hygiene or one of the State co-operative laboratories. In order to make this service convenient for the physicians in the State, a special outfit for collecting and mailing specimens from these cases has been prepared, and will be sent without charge to any physician, upon request.

We would call your attention to the great assistance the laboratory can be to you in diagnosing any of these cases. A written report from the laboratory stating the organism found to be the gonococcus confirms your diagnosis, and shares with you much of the responsibility of making such a diagnosis.

Respectfully,

W. D. STOVALL.

New York, October 19th, 1917.

Dr. Rock Sleyster, Secretary, State Medical Society of Wisconsin, Waupun, Wisconsin.

DEAR DR. SLEYSER:

Public health nurses have greatly increased during the past few years. Hundreds, perhaps thousands of small towns and rural communities as well as large cities, have come to regard them as indispensable community servants. Their service represents at least a minimum of skilled nursing which can usually be supplemented with

safety by family, neighbors or trained attendants. They also stand as much for the protection of health as for the care of the sick. Their value as health agents is now pretty generally recognized by health officers, school boards, and manufacturers as well as by the public itself.

Because their work is largely preventive, one of their chief values is that they persuade many people to call upon their doctor before an illness has become serious enough to have convinced them that it was necessary to consult him. Nevertheless, their opportunities as health teachers most often depend upon and follow their entrance to the homes in time of need due to illness. They are very dependent upon the local physicians because it is an invariable rule that no visiting or public health nurse shall perform any treatment nor administer any medicine, nor even make repeated calls upon a patient except with the consent and direction of the family physician.

Oftentimes these facts are not understood by country doctors and consequently they refuse to call for the nurses' assistance and even discourage their patients and their families from doing so. This situation is becoming less and less frequent but still exists in some localities and among some doctors.

More than ever, these nurses will be needed now that so many physicians are being called to military duty and yet they cannot serve the people unless the doctors who remain at home will recognize and call upon them.

The members of the National Organization for Public Health Nursing among whom are many Red Cross Town and Country Nurses, have instructed me to bring this matter to the attention of the State Medical Associations in the hope that they will see fit to urge their county societies to interpret the work of public health nurses to their members to clear away the misunderstandings which are now in some places preventing the best and fullest use of public health nurses and to encourage employment of their services.

Representative women in this field will welcome opportunities to discuss the subject before state or local associations.

Sincerely yours,

ELLA PHILLIPS CRANDALL,

Executive Secretary.

PATRIOT PHYSICIANS.

The following are lists of Wisconsin physicians who have been reported on November 1st as being in the Government Service or as having accepted commissions and awaiting call. These lists are necessarily inaccurate and we would greatly appreciate our attention being called to any names which have been omitted or to any names included which should not be. Kindly send corrections to Doctor Rock Sleyster, Secretary, Waupun, Wisconsin.

WISCONSIN PHYSICIANS IN THE SERVICE.

- Aaron, Joe, Milwaukee.
 Allen, W. E., Sun Prairie.
 Amundson, K. K., Cambridge.
 Andrew, C. H., Platteville.
 Andrews, C. W., Waupaca.
 Angell, E. D., Milwaukee.
 Aplin, F. W., Waukesha.
 Armitage, J. E., Milwaukee.
 Axley, A. A., Butternut.
 Badeaux, G. I., Spooner.
 Bading, Gerhard A., Milwaukee.
 Baker, G. R., Tomahawk.
 Ballard, J. A., Hayward.
 Barnes, Edgar, Ripon.
 Barnes, H. T., Pewaukee.
 Barrett, E. J., Sheboygan.
 Bassler, H. H., Oshkosh.
 Bedford, E. W., Sheboygan.
 Beeson, H. B., Cornell.
 Bellis, G. L., Wauwatosa.
 Bennett, L. J., Ft. Atkinson.
 Bennett, W. C., Rhinelander.
 Black, N. M., Milwaukee.
 Blanton, S. G., Madison.
 Blumenthal, R. W., Milwaukee.
 Boland, J. E., Two Rivers.
 Borden, F. R., Plainfield.
 Boren, J. W., Marinette.
 Bornstein, Max, Milwaukee.
 Bowen, R. L., Oshkosh.
 Boyden, W. L., Seymour.
 Brewer, L. C., Jefferson.
 Brook, J. J., Milwaukee.
 Bruins, D., Milwaukee.
 Brunckhorst, F. O., Hortonville.
 Bryant, J. R., Wausau.
 Burns, H. J., Hudson.
 Carter, H. M., Madison.
 Cary, L. W., Winnebago.
 Christensen, J. W., Sparta.
 Clarke, Chas. P., Janesville.
 Clark, T. C., Oconto.
 Clark, W. T., Ft. Atkinson.
 Coleman, H. N., Barrow.
 Combs, C. J., Oshkosh.
 Conley, J. G., Racine.
 Conley, J. M., Oshkosh.
 Converse, G. L., Webster.
 Cooksey, R. T., Madison.
 Corcoran, C. J., Milwaukee.
 Corr, J. T., Racine.
 Cottingham, M. D., Lake Geneva.
 Cowan, W. F., Stevens Point.
 Crane, Martin C., Osseo.
 Crowe, N. F., Walworth.
 Dana, A. C., Fond du Lac.
 Darby, G. S., Brodhead.
 Darling, Frank, Milwaukee.
 Dawson, Chas. A., River Falls.
 Dean, J. P., Madison.
 Deeker, C. O., Crandon.
 Deeker, H. S., Milwaukee.
 Dehmel, R. A., S. Germantown.
 Del Marcelle, C. C., Neenah.
 Doctor, W. R., Cazenovia.
 Dodge, C. H., Clinton.
 Draper, M. H., Deerfield.
 Driessel, S. J., Barton.
 Dudeek, D. M., Statesan.
 Fbert, E. C., Milwaukee.
 Egan, Doctor, Hurley.
 Egan, Wm. J., Milwaukee.
 Egeland, G. R., Sturgeon Bay.
 Elvis, E. B., Medford.
 Epley, O. H., New Richmond.
 Erikson, H. C., Stanley.
 Evans, Edward P., S. Milwaukee.
 Farrage, J., Breckenridge.
 Farrell, A. M., Two Rivers.
 Ferguson, F. H., Elroy.
 Festerling, E. G., Reedsville.
 Fielder, O. A., Sheboygan.
 Fitzgerald, G. M., Milwaukee.
 Fleming, W. J., Wauwatosa.
 Foat, John S., Ripon.
 Foerster, Harry, Milwaukee.
 Ford, Wm. B., Milwaukee.
 Fowler, P. H., Plain.
 Frew, J. W., Milwaukee.
 Frawley, W. J., Appleton.
 Fritehen, A. F., Franksville.
 Fulton, H. A., Eau Claire.
 Flynn, L. H., Eau Claire.
 Gendron, A. E., River Falls.
 Gilchrist, R. T., Milwaukee.
 Gillette, H. E., Packwaukee.
 Gleason, C. M., Oconomowoc.
 Gosin, F. J., Green Bay.
 Gosin, D. F., Green Bay.
 Gradle, H. S., Chicago.
 Graebner, H., Milwaukee.
 Grannis, I. V., Menomonie.
 Gray, R. H., La Crosse.
 Greenberg, Harry, Milwaukee.
 Gunderson, C. A. S., Madison.
 Hafemeister, E. F., North Prairie.
 Hager, F. J., Denmark.
 Hanley, W. J., Kenosha.
 Hanson, E. W., Three Lakes.
 Hayes, E. P., Eau Claire.
 Hebron, R. A., Cataract.
 Hogan, J. H., Racine.
 Hogue, G. I., Milwaukee.
 Holmes, B. H., Delavan.
 Hudek, D. F., Statesan.
 Huff, F. C., Sturgeon Bay.
 Hughes, C. W., Winneconne.
 Hugo, D. G., Oshkosh.
 Hunter, C. M., Stetsonville.
 Ivy, Robert H., Milwaukee.
 Jenner, A. G., Milwaukee.
 Johnson, J. C., Ogdensburg.
 Johnson, W. W., Racine.
 Joseph, W. A., Hancock.
 Kampmicer, A. J., Milwaukee.
 Kayeen, Ralph, Oconomowoc.
 Keenan, H. A., Stoughton.
 Keenan, T. P., Milwaukee.
 Kelly, D. M., Baraboo.
 Kenney, C. J., Milwaukee.
 Kenney, R. L., Milwaukee.
 King, G. F., Green Bay.
 Knox, E. S., Bowler.
 Krahn, G. W., Oconto Falls.
 Kraus, E. T., Sun Prairie.
 Krygier, A. A., Milwaukee.
 Lademann, O. E., Milwaukee.
 Lasehe, P. G., Richland Center.
 Leahy, J. D., Milwaukee.
 Lewis, S. J., Milwaukee.
 Liefert, W. C., Milwaukee.
 Longley, J. R., Fond du Lac.
 Lorenz, W. F., Mendota.
 Maekedon, T. E., Cedarburg.
 MacLaughlin, H. E., Waupaea.
 Madison, J. D., Milwaukee.
 McBeath, N. E., Livingston.
 McCarthy, H. C., Richland Center.
 McCarty, M. A., La Crosse.
 McCary, A. J., Green Bay.
 McCormick, Wm. C., Tomahawk.
 McEachern, W. A., Superior.
 McGinnis, J. E., Green Bay.
 Menefee, B. F., Montgomery City.
 Merrill, W. G., Grand Rapids.
 Mertens, H. G., Bayfield.
 Midgley, A. E., Whitewater.
 Miller, D. C., Loyal.
 Miller, H. C., Whitewater.
 Miller, Thomas, Oconomowoc.
 Mitchell, E. J., Brodhead.
 Mitten, A. A., Milwaukee.
 Mix, H. C., Green Bay.
 Monstad, J. W., New London.
 Moore, L. A., Monroe.
 Mueller, W. E., Green Bay.
 Myers, J. A., Cottage Grove.
 Neilson, G. W., Milwaukee.
 Nelson, N. O., Madison.
 Nichols, R. M., Sheboygan Falls.
 Nims, C. H., Oshkosh.
 Notbohm, D. L. R., Dousman.
 Ouellette, C. J., Oconto.
 Palmer, J. A., Arcadia.
 Parker, A. S., Clinton.
 Parmenter, E. L., Mondovi.
 Patek, A. J., Milwaukee.

- Pearson, C. M., Ogema.
 Peirce, F. J., Cheyenne.
 Phillips, L. J., Weyhauser.
 Podlasky, H. B., Milwaukee.
 Pcmainville, F. X., Grand Rapids.
 Pope, Frank, Racine.
 Pretts, W. W., Platteville.
 Provost, A. J., Oshkosh.
 Randall, A. J., Kenosha.
 Randall, G. R., Milwaukee.
 Reay, G. R., La Crosse.
 Richards, C. A., Rhineland.
 Richards, C. W., Reedsburg.
 Robinson, B. N., Prairie du Chien.
 Rodecker, R. C., Holcombe.
 Rose, F., Coleman.
 Rowe, L. B., Brodhead.
 Rowley, B. B., Whitefish Bay.
 Rowley, C. C., Winnebago.
 Rueth, J. E., Sun Prairie.
 Ruhland, G. C., Milwaukee.
 Salbreiter, W. P., Racine.
 Sargeant, H. S., Wauwatosa.
 Sargent, H. L., Milwaukee.
 Saylor, H., Merrill.
 Scantleton, J. M., Sparta.
 Schemmer, A. J., Colby.
 Schlenker, G. H., Gilman.
 Schiek, I. E., Rhineland.
 Schneider, J. F., Oshkosh.
 Schnetz, L. N., Racine.
 Schoofs, J. J., Johnsbury.
 Schoofs, O. P., Wauwatosa.
 Schwarz, S. G., Humbird.
 Scott, J. R., Appleton.
 Seaman, G. E., Milwaukee.
 Senn, Geo., De Pere.
 Senn, Ulrich, Milwaukee.
 Shimek, A. J., Manitowoc.
 Shubert, F., Milwaukee.
 Simons, Neal S., Taylor.
 Smith, S. M. B., Wausau.
 Snodgrass, T. J., Janesville.
 Spencer, Geo. F., Evansville.
 Squires, C. A., Sheboygan.
 Steffen, L. A., Antigo.
 Stoland, Iver, Eau Claire.
 Smith, T. D., Neenah.
 Sykes, L. G., Milwaukee.
 Taylor, Frank B., Madison.
 Taylor, J. G., Milwaukee.
 Taylor, J. R., Madison.
 Thompson, A. S., Mt. Horeb.
 Thompson, R. D., Reedsburg.
 Towle, Geo. E., Mosinee.
 Trobridge, P. T., Washburn.
 Trock, M. J., Milwaukee.
 Tyvand, James C., Whitehall.
 Van der Ven, J. M., Martell.
 Vankirk, F. W., Janesville.
 Vogel, Carl C., Elroy.
 Watkins, C. W., Oconto.
 Wedge, Athol H., Waupun.
 Wilkinson, M. R., Oconomowoc.
 Willette, Thos., West Allis.
 Woodhead, F. J., Merton.
 Yates, J. L., Milwaukee.

ACCEPTED COMMISSIONS—AWAITING CALL.

- Baird, J. C., Eau Claire.
 Beebe, C. M., Sparta.
 Peffel, J. M., Milwaukee.
 Bendixen, B. O., Campbellsport.
 Bentley, J. E., Portage.
 Berger, A. J., New Holstein.
 Bolton, E. L., Chilton.
 Brazeau, G. N., Racine.
 Brown, C. W., Milwaukee.
 Buckley, Wm. E., Hartford.
 Buehl, H. A., Prairie Farm.
 Butler, F. E., Menomonie.
 Campbell, L. A., Clear Lake.
 Chorlog, J. K., Madison.
 Critchlow, C. A., Mellen.
 De Neven, A. V., Wyoena.
 Dodd, J. M., Ashland.
 Dierschke, P. C., N. Freedom.
 Donohue, W. E., Manitowoc.
 Dughearty, C. F., Richland Center.
 Eggers, H. E., Omaha, Nebr.
 Elfers, J. C., Sheboygan.
 Evans, Curtis A., Milwaukee.
 Evans, Edward, La Crosse.
 Farrage, J., Breckinridge.
 Fletcher, E. A., Milwaukee.
 Foster, A. M., Racine.
 Fox, G. W., Milwaukee.
 Gaenslen, F. J., Milwaukee.
 Gates, Eugene, Two Rivers.
 Gavin, S. E., Fond du Lac.
 Gordon, J. S., Milwaukee.
 Hansen, W. C., Racine.
 Harper, C. A., Madison.
 Harrison, Geo., Ashland.
 Hatch, W. E., Superior.
 Hendrickson, H., Green Bay.
 Hertzman, C. O., Ashland.
 Hinrichs, R. G., Ashland.
 Hitz, H. B., Milwaukee.
 Jefferson, H. A., Clintonville.
 Jones, M. L., Wausau.
 Kay, Harry M., Chicago.
 Kaysen, Ralph, Watertown.
 Kelly, C. D., Blair.
 Kennedy, F. H., Greenwood.
 Kerston, P. E., Two Rivers.
 Kraus, E. T., Sun Prairie.
 Kristjanson, H., Milwaukee.
 Lawhorn, C. C., Milwaukee.
 Lillie, O. R., Milwaukee.
 Lundmark, L. M., Ladysmith.
 Lynch, D. W., West Bend.
 McDill, J. R., Milwaukee.
 McGrath, E. F., Appleton.
 McMahon, F. B., Milwaukee.
 McMahon, J. P., Milwaukee.
 Mehl, H. F., Milwaukee.
 Middleton, W. S., Madison.
 Moore, W. N., Appleton.
 Murphy, E. R. F., Antigo.
 Murphy, Wm. T., Waukesha.
 Nelson, O. A., Park Falls.
 Newman, Robert, Chicago.
 Nott, Geo. W., Racine.
 Nuzum, Thos. W., Janesville.
 O'Brien, H. N., Darien.
 Patchen, Geo. W., Manitowoc.
 Pember, J. F., Janesville.
 Peterson, Geo. E., Waukesha.
 Pullen, A. J., N. Fond du Lac.
 Puls, A. J., Milwaukee.
 Quinn, Jos. F., Milwaukee.
 Rantz, W. L., Rosholt.
 Riley, E. A., Park Falls.
 Roberts, D. W., Milwaukee.
 Rogers, E. H., Stevens Point.
 Rogers, Fred C., Oconomowoc.
 Rogers, P. F., Milwaukee.
 Russell, F. R., Neenah.
 Sauthoff, Aug., Mendota.
 Sauthoff, Mary, Mendota.
 Seanlan, P. L., Prairie du Chien.
 Scheer, G. H., Sheboygan.
 Schlesselman, G. H., Fond du Lac.
 Shockley, H. O., Darlington.
 Smith, A. D., Gilmanton.
 Smith, Eugene, Milwaukee.
 Stoddard, C. H., Milwaukee.
 Stuesser, C. N., Oconomowoc.
 Taylor, W. A., Portage.
 Thompson, F. J., Milwaukee.
 Thompson, J. B., Wittenberg.
 Voorus, L. O., Beaver Dam.
 Walters, F. A., Stevens Point.
 Wiesender, A. J., Berlin.
 Wilkowski, C. W., Chippewa Falls.
 Wilson, Richard S., Milwaukee.
 Witte, Dexter H., Wauwatosa.

RULES FOR DISLOYALISTS.

Here are ten rules of conduct for those who wish Germany to win the war. According to the Independent a careful observance of these rules will enable a traitor to operate without danger to himself.

I. When driven to make an unequivocal statement protest your loyalty and then change the subject.

II. Assert on every occasion that "Wall Street" made the war. Never mind explaining when, how, or why.

III. Get in all the sneers you can at any professions of ideal motives. If you can find any flaw in our democracy say that "we are just as bad an autocracy as Germany." Use the word "hypocrisy" at every opportunity. Place the war in as sordid a light as possible.

IV. It is dangerous to denounce the United States directly. But rake history from end to end for mud to throw at the allies. Especially, twist the lion's tail.

V. Profess great concern lest sending food to Europe will starve America. Support every embargo movement that applies to the allied nations and none that does not.

VI. If the president asks for any extension of power rave about "dictatorship" and the "overthrow of the liberties for which our fathers, etc."

VII. Spread rumors that the allies are going to betray us or take advantage of us as soon as we are deeply enough involved in the war.

VIII. Accept conscription in principle but hamper its working in every possible way. One good way is to start scares about revolution and internal disorder as a pretext for keeping a large part of the army at home.

IX. Demonstrate that the enemy is unconquerable and victory hopeless. Play the "candid friend" and act as a depressant.

X. Be very jealous to prevent "entangling alliances" and be much concerned about the Monroe Doctrine if we "mix ourselves in European quarrels." A permanent league of nations would embarrass your junker friends if they remain in power after the war. Germany can only hope to conquer other nations if they act selfishly and in isolation.—*Chamberlain's*.

OPPORTUNITY FOR PHYSIOLOGISTS AND BIOCHEMISTS.

The Surgeon General of the army is organizing a Food Division of his office, the object of which is to safeguard the nutritional interests of the army by means of competent inspection of food from the standpoint of nutritive value, the supervision of mess conditions, including the economical utilization of food, and a study of the suitability of the army ration for troops in the camp and in

the field. Well-trained physiologists and biochemists are needed to direct this work. These men are being commissioned, according to age and experience, as first lieutenants and captains in the Sanitary Corps, Medical Department; or, if they have medical degrees, in the Medical Reserve Corps.

It is probable there will be as many commissioned officers as there are camps and cantonments. Nutritional surveys will be conducted at the camps by surveying parties composed of these commissioned officers, and of drafted men, who have had scientific training, acting as assistants and clerks. It is estimated that such a survey can be completed in from ten days to two weeks for each camp.

It is hoped by means of these surveying parties also to instruct the company mess sergeants and company cooks in improved methods of selecting and preparing the foods. A school for the finished training of the scientists employed in this work is now being organized. The organization of the army, the army methods of handling and cooking foods, the latest methods of food examination and analysis, the conduct of the food survey and kindred topics will be covered by competent instructors from various departments of the army and other departments of the national government.

The facilities of the Bureau of Chemistry, including its analytical laboratories scattered over the country, have been placed at the disposal of the Food Division for this work. Analyses of the garbage will be made and of all foods whose composition is not already known, and the actual distribution of nutrients and of total calories consumed by men will be computed. Any alteration of the army ration in the future will be based only upon the facts as thus gathered. There is every promise that this service will prove to be of strategic importance in the control of the health and welfare of the troops from the place of their mobilization to the battle front.—*Science*.

DO YOU KNOW THAT

Civilian health is the rock upon which military efficiency rests?

The little house fly is a dangerous thing,
The time to "swat 'em" is in the spring?

The ingestion of wood alcohol may produce blindness?

Swimming is a healthful exercise?

Human beings are the great agencies in the spread of human diseases?

No community can be really successful without safe waste disposal?

THE STATE MEDICAL SOCIETY OF WISCONSIN

ORGANIZED 1841

Officers 1916-17

H. E. DEARHOLT, Milwaukee, President
G. WINDESHEIM, Kenosha, President-Elect
ROCK SLEYSER, Waupun, Secretary

J. L. SMITH, Wausau
1st Vice President
J. F. PEMBER, Janesville, 3rd Vice President
DANIEL HOPKINSON, Milwaukee, Ass't Secretary

I. G. BABCOCK, Cumberland
2nd Vice President
S. S. HALL, Ripon, Treasurer

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1st Dist., M. R. Wilkinson - Oconomowoc
2nd Dist., G. Windesheim - Kenosha
TERM EXPIRES 1918
3rd Dist., F. T. Nye - Beloit
4th Dist., W. Cunningham - Platteville

TERM EXPIRES 1919
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6th Dist., H. W. Abraham - Appleton
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7th Dist., Edward Evans - LaCrosse
8th Dist., T. J. Redelings - Marinette

TERM EXPIRES 1921
9th Dist., Joseph Smith - Wausau
10th Dist., R. U. Cairns - River Falls
TERM EXPIRES 1922
11th Dist., J. M. Dodd - Ashland
12th Dist., D. J. Hayes - Milwaukee

Delegates to American Medical Association

H. M. BROWN, Milwaukee

ROCK SLEYSER, Waupun

C. H. LEMON, Milwaukee

Alternates

W. E. BANNEN, LaCrosse

T. W. NUZUM, Janesville

WILSON CUNNINGHAM, Platteville

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EDWARD QUICK, Milwaukee, Chairman

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Committee on Medical Defense

G. E. SEAMAN, Milwaukee, Chairman

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A. J. PATEK, Milwaukee

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MEDICAL SECTION
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J. S. EVANS, Madison, Secretary

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DANIEL HOPKINSON, Milwaukee, Secretary

EYE, EAR, NOSE, THROAT SECTION
S. S. HALL, Ripon, Chairman
JOS. BELLIN, Green Bay, Secretary

The Wisconsin Medical Journal, Official Publication

LIST OF EXECUTIVE OFFICERS OF COUNTY MEDICAL SOCIETIES.

County.	President.	Secretary.
Ashland-Bayfield-Iron	C. J. Smiles, Ashland.	O. Braun, Ashland.
Barron-Polk-Washburn-Sawyer-Burnett	H. M. Coleman, Barron.	I. G. Babcock, Cumberland.
Brown-Kewaunee	L. E. Levitas, Green Bay.	E. G. Nadeau, Green Bay.
Calumet	Wm. Schmitz, School Hill.	E. L. Bolton, Chilton.
Chippewa	C. W. Wilkowski, Chippewa Falls.	F. T. McHugh, Chippewa Falls.
Clark	H. H. Christoferson, Colby.	E. L. Bradbury, Neillsville.
Columbia	O. O. Force, Pardeeville.	A. F. Schmeling, Columbus.
Crawford	C. B. Lumsford, Gays Mills.	A. J. McDowell, Soldiers Grove.
Dane	Frank Drake, Meudota.	L. H. Prince, Madison.
Dodge	R. E. Bachhuber, Mayville.	E. S. Elliott, Fox Lake.
Door	H. C. Sihree.	T. C. Proctor, Sturgeon Bay.
Douglas	D. R. Searle, Superior.	L. A. Potter, Superior.
Dunn-Pepin	A. F. Heising, Menomonie.	G. C. Nedry, Menominee.
Eau Claire	H. F. Derge, Eau Claire.	L. H. Flynn, Eau Claire.
Fond du Lac	G. B. McKnight, Fond du Lac.	F. M. McGauley, Fond du Lac.
Grant	J. C. Doolittle, Lancaster.	M. B. Glasier, Bloomington.
Green	W. B. Gnagi, Monroe.	L. A. Moore, Monroe.
Greene Lake-Washara-Adams	G. E. Baldwin, Green Lake.	J. A. Wiesender, Berlin.
Iowa	G. H. McCallister, Avoca.	J. R. Hughes, Dodgeville.
Jefferson	A. A. Busse, Jefferson.	W. A. Engsherg, Lake Mills.
Juneau	Brand Starnes, Mauston.	A. T. Gregory, Elroy.
Kenosha	C. R. Caughey, Kenosha.	J. F. Hastings, Kenosha.
La Crosse	G. W. Lueck, La Crosse.	J. M. Furstmann, La Crosse.
Lafayette	J. C. Huhenthal, Belmout.	H. O. Shockley, Darlington.
Langlade	M. J. Donohue, Antigo.	J. C. Wright, Antigo.
Lincoln	H. G. Hincley, Merrill.	D. B. Reinhart, Merrill.
Manitowoc	J. F. Pritchard, Manitowoc.	Louis Falge, Manitowoc.
Marathon	W. A. Green, Wausau.	F. H. Frey, Wausau.
Marinette-Florence	H. P. Schroeder, Marinette.	Luella E. Axtell, Marinette.
Milwaukee	P. F. Rogers, Milwaukee.	Daniel Hopkinson, Milwaukee.
Monroe	A. R. Bell, Tomah.	Spencer D. Beebe, Sparta.
Oconto	C. W. Stoelting, Oconto.	T. C. Clarke, Oconto.
Oneida-Forest-Vilas	W. C. Bennett, Rhinelander.	C. A. Richards, Rhinelander.
Outagamie	G. A. Ritchie, Appleton.	M. E. Rideout, Appleton.
Ozaukee	Geo. F. Savage, Port Washington.	Henry M. Katz, Cedarburg.
Pierce	W. A. Lumley, Ellsworth.	R. U. Cairns, River Falls.
Portage	W. W. Gregory, Stevens Point.	J. D. Lindores, Stevens Point.
Price-Taylor	E. A. Riley, Park Falls.	G. C. Wichman, Rib Lake.
Racine	J. H. Hogan, Racine.	Susan Jones, Racine.
Richland	C. F. Dougherty, Richland Center.	Gideon Benson, Richland Center.
Rock	T. W. Nuzum, Janesville.	E. B. Brown, Beloit.
Rusk	Julian C. Baker, Hawkins.	L. M. Lundmark, Ladysmith.
Sauk	F. D. Hulbert, Reedsburg.	Roger Cahoon, Baraboo.
Shawano	J. B. Gordon, Shawano.	W. H. Cantwell, Shawano.
Sheboygan	Otho Fiedler, Sheboygan.	C. N. Sonnenburg, Sheboygan.
St. Croix	R. Kunny, Baldwin.	O. H. Epley, New Richmond.
Trempealeau-Jackson-Buffalo	G. F. Stack, Independence.	C. F. Peterson, Independence.
Vernon	J. K. Schreiner, Westby.	F. E. Morley, Viroqua.
Walworth	M. D. Cottingham, Lake Geneva.	Edward Kinne, Elkhorn.
Washington	H. F. Weber, Newburg.	A. H. Heldner, West Bend.
Waukesha	H. A. Peters, Waukesha.	S. B. Ackley, Oconomowoc.
Waupaca	W. Irving, Manawa.	G. T. Dawley, New London.
Winnebago	J. W. Lockhart, Oshkosh.	E. H. Hunt, Oshkosh.
Wood	Ed. Hougen, Grand Rapids.	W. M. Ruckle, Grand Rapids.

SOCIETY PROCEEDINGS

WASHINGTON COUNTY

CALUMET COUNTY

The following members were elected to office for Calumet County Medical Society, on Oct. 18, 1917: President, Dr. William Schmitz, School Hill; vice-president, Dr. J. N. Harkins, Forest Junction; secretary-treasurer, Dr. E. L. Bolton.

NINTH COUNCILOR DISTRICT.

About 35 members of the Ninth Councilor District Medical Society met at Wausau for the annual fall meeting. During the afternoon a tuberculosis clinic was held at the Rib View Sanatorium, and during the evening a dinner and lecture were enjoyed at the Wausau Club. The clinic was conducted by Dr. Harry Cohn, superintendent of Muirdale, Wauwatosa. The next meeting of the Society will be held some time in January at Marshfield.

OZAUKEE COUNTY.

A regular meeting of Ozaukee County Medical Society was held at Hotel Schanen, Grafton, Wis., Nov. 1st, 1917, 8 P. M. The following officers were elected for the ensuing year: President, Dr. Geo. F. Savage, Port Washington; vice-president, Dr. Chas. A. Balkwill, Grafton; secretary-treasurer, Dr. Henry M. Katz, Cedarburg; delegate, Dr. R. C. Pfiel, Thiensville.

DR. CHAS. A. BALKWILL.

ROCK COUNTY

The regular monthly meeting of Rock County Medical Society was held on October 30th, 1917, at the Myers Hotel, at Janesville. Dr. C. H. Bunting of the University of Wisconsin, addressed the society on "Modern Aspects of Diseases of the Blood." Dr. Harold Helm, Beloit, spoke on "Focal Infections," and Dr. Forbush, Orfordville on "Enterocolitis."

The next meeting will be held at Beloit on November 27th in the lecture room of the "Y."

SOO LINE SURGICAL ASSOCIATION.

The Soo Surgical Association held its annual meeting in Chicago, on October 22 and 23, under the presidency of Dr. John M. Dodson, Chicago, Ill. The following officers were elected: President, Dr. George M. Steele, Oshkosh; vice-president, Dr. David C. Pierpont, Ironwood, Mich.; secretary-treasurer, Dr. John H. Rishmiller, Minneapolis, Minn.

The next annual meeting will be held in Minneapolis.

J. H. RISHMILLER, M. D., *Secretary*.

The annual meeting of Washington County Medical Society was held at the First National Bank, West Bend, on September 27th. The following officers were elected: President, Dr. H. F. Weber, Newburg; vice-president, Dr. Ph. Kauth, Schlesingerville; secretary-treasurer, Dr. A. H. Heidner, West Bend; censor, Dr. N. A. Hausmann, Kewaskum; delegate, Dr. D. W. Lynch, West Bend; alternate, Dr. W. J. Wehle, West Bend.

Dr. B. H. Schlomowitz of Marquette University Medical School gave a talk on "The Tissues of the Heart with Special Reference to the Action of Digitalis."

NEWS ITEMS AND PERSONALS.

DR. R. A. WALKER, Menomonie, was slightly injured in a railroad wreck on the Northwestern road at Northfield, Ill., on October 24th.

DR. E. W. KELLOGG, Milwaukee, is confined to his home by injuries received when struck by an automobile on October 13th.

DR. ARTHUR T. HOLBROOK, Milwaukee, succeeds the late Col. W. P. Moore, as commander of the Loyal Legion. This is the first time that a man who has not seen active military service has assumed duties of the office.

DR. WILLIAM H. DALE of Harrisburg, Oregon, formerly of Palmyra, has been appointed a member of the Oregon State Board of Health.

DR. LEWIS J. DANIELS, who was confirmed by the common council as Milwaukee's new health commissioner, took the oath of office on Oct. 10th.

DR. F. M. HARRIS, has resigned his position as health officer and director of the State Co-operative Laboratory at Fond du Lac. The cause of his resignation is insufficient funds to carry on the work and compensation for his services.

DR. WALTER W. STEBBINS, formerly of Mt. Vernon and Verona, has opened an office in Madison.

DR. ALBERT ANDREW ANKENBRANDT, formerly of Schlesingerville, but later located at Mt. Carmel, Ill., has been commissioned captain in the Medical Officers' Reserve Corps. and is now at Camp Zachery Taylor, at the Base Hospital, Louisville, Ky.

DR. ARTHUR C. DANA, Fond du Lac, has been commissioned a 1st lieutenant in the Medical Department of the Officers' Reserve Corps.

DR. FRANK OATES, Fond du Lac, has received notice of his commission as a 1st lieutenant in the Medical Corps.

DR. J. W. BIRD, Stevens Point, has been commissioned a captain in the Medical Officers' Reserve Corps.

FIRST LIEUTENANT WM. J. FLEMMING, North Lake, has been ordered to Baltimore, Md., to enter Johns Hopkins University for special study.

DRS. CHAS. A. CRITCHLOW and C. W. LOCKHART, Mellen, have been commissioned captain and 1st lieutenant respectively, in the Medical Officers' Reserve Corps.

1ST LIEUTENANT C. A. DAWSON, River Falls, has been ordered to report at Fort Oglethorpe, Ga., and Capt. A. E. Gendron, also of River Falls, has been ordered to Ft. Benjamin Harrison, to be assigned to the tuberculosis department.

DR. S. M. B. SMITH, Wausau, is now at Ivy, Virginia, and later expects to leave for Europe with the Red Cross. He expects to be assigned to the department of Child Welfare.

DR. LYMAN STEFFEN, Antigo, a 1st lieutenant in the Medical Officers' Reserve Corps, is now in England, has been placed in charge of a hospital for wounded soldiers at Manchester.

LIEUT. GEORGE FITZGERALD, Fond du Lac, stationed at Ft. Riley, Kansas, has received an appointment as Sanitary Inspector of the drafted men's camp at Ft. Funston, Kansas.

MAJOR ROBERT H. GRAY, La Crosse, now at Waco, Texas, has been promoted to brigade surgeon of the 57th depot brigade.

Through the efforts of Dr. W. J. Cronyn, Milwaukee, one thousand volumes of valuable medical books have been donated to the library of Marquette University School of Medicine by the Cronyn family of Buffalo, N. Y.

Announcement is made that evening office hours will be instituted at Marquette Dental Infirmary, certain evenings each week.

A series of monthly clinics is to be inaugurated at the Milwaukee Children's Free Hospital. These clinical gatherings are to be held the second Thursday of every month at 4:30 P. M. at the Out Patient Department of the Hospital, 10th and Wells Streets. These meetings are open to all practicing physicians, internes of hospitals and medical students. There is much excellent material at the hospital. A few interesting cases will be shown and discussed at each meeting. Notices cannot be sent to all physicians every month, so please note these dates: the second Thursday of every month at 4:30 P. M. Nov. 8, 1917; December 13, 1917; January 10, 1918; February 14, 1918; March 14, 1918; April 11, 1918; May 9, 1918.

The New York Skin and Cancer Hospital, under the direction of Dr. L. W. Beech, will conduct the 19th series of clinical lectures on Diseases of the Skin, in the Out-patient Department of the Hospital, on Wednesday afternoons, at 4:15, commencing November 7th. These lectures are free to the medical profession on the presentation of their cards.

The Oconto County Hospital, the management of which Dr. C. W. Stoelting recently assumed, is closed, because, according to Dr. Stoelting's statement "the hospital is not a paying proposition."

The formal opening of the Evangelical Deaconess Hospital of Monroe was held on October 8th.

St. Michael's Hospital, Stevens Point, is the recipient of two contributions of \$500 each from the Whiting-Plover Paper Co. and the Wisconsin River Paper and Pulp Co., to be applied on its debt of \$2,400.

Hanover Hospital, Milwaukee, officially changed hands on September 30th, when it was taken over by a coterie of Milwaukee physicians and surgeons, who have organized a \$100,000 corporation for the enlargement and operation of the institution. Hanover Hospital has been operated for the past fifteen years by Dr. William F. Malone. Dr. Malone is a member of the new organization.

Through the efforts and generosity of Dr. John G. Meachem, the establishment of a children's hospital in Racine has been made possible. Dr. Meachem has purchased a house on Wisconsin Street, and has given it to St. Luke's Hospital, and the Alice Horlick Hospital for a term of years, free of rent and taxes. The building will accommodate seventeen patients.

The first private charitable tuberculosis sanitarium in the state, founded and built by the Madison Anti-Tuberculosis Society, was opened to patients on November 15th. The sanitarium will accommodate 30 patients. The sanitarium was made possible through the generosity of Madisonians and Dr. C. L. Vilas, who donated the buildings.

The Racine County Board of Supervisors has voted an appropriation of \$6,000 to be used in repairing the buildings of Sunny Rest Tuberculosis Sanatorium. The sanatorium was erected less than five years ago at a cost of \$40,000. Because very little lime had been used in the plaster the walls and ceilings are falling away. An investigation has been ordered, but in order to protect the patients, immediate repairs are ordered.

The new Infirmary and the Memorial Hospital, two of the buildings of the proposed medical group at the University of Wisconsin, are soon to be under construction. Plans have been drawn, and sites selected. The Cornelia Bradley Memorial Hospital will accommodate 24 patients. The new Infirmary, for which the 1917 Legislature appropriated \$50,000, will replace the temporary 20-bed infirmary. The new medical group will be situated between University Avenue and Linden Drive, near the Chemistry building. The two buildings will be the same size, 50 by 150 feet, two stories in height and fire-proof.

The largest recuperation camp for the sick and wounded soldiers of the United States navy will be at Ft. Lyons in Colorado, when the new additions now under construction are completed. At present the sanitarium accommodates 200 patients, but work is being pushed on the construction of buildings that will make it possible to care for between 5,000 and 6,000 marines and sailors who are incapacitated through tuberculosis and other

diseases. The cost of the work will be about \$2,000,000.

A fund of \$300,000 is being started to outfit a medical unit for the army. The unit will specialize in the treatment of nervous ailments resulting from shell shock and other causes.

To assist communities in making their milk supply safe, the United State Department of Agriculture has issued a "Guide for Formulating a Milk Ordinance". This document, Department Bulletin 585, suggests a form of ordinance designed to protect the community against fraud and disease, and to insure cleanliness in the production and handling of milk. Health officers and physicians interested may obtain it free on application to the department.

MARRIAGES

Dr. Edgar Bedford, Sheboygan and Miss Gladys Grinnell, Marinette, on September 29th.

Dr. John L. Sullivan, Milwaukee and Miss Lona Chapman, North Fond du Lac, on October 27th.

Dr. F. W. Hannum and Miss Lynne Carr, both of Rhinelander, on Oct. 27th.

Dr. Dana B. Dishmaker and Miss Olga Haney, both of Kewaunee, on Oct. 26th.

Lieut. Wade H. Fortner, M. R. C., U. S. Army, Princeton, and Miss Elsie Pineau, Milwaukee, at Fond du Lac, on September 26th.

DEATHS

Dr. Thomas P. Russell, Oshkosh, died on October 10, aged 93 years. Dr. Russell was a New Englander, having been born at Bethel, Vermont. He was a graduate of Vermont Medical College—class of 1852. He practiced for two years at Weston, Vermont, and then came to Oshkosh. Dr. Russell saw about three years service in the civil war. He was appointed assistant surgeon of the Second Wisconsin Infantry, and later served in the same capacity with the first Wisconsin Cavalry. After his discharge for disability he returned to Oshkosh and resumed his practice.

REMOVALS

Dr. A. W. Slaughter, Ephraim to Green Bay.

Dr. A. N. Hedges, Birchwood to Butternut.

Dr. W. F. Ragan, Neopit to Milwaukee.

Dr. G. A. Steele, Redgranite to Poynette.

Dr. P. M. Ross, Granton to Milwaukee.

Dr. J. C. DeWane, Boyceville to Ossette, Mont.

Dr. J. W. Christensen, Westby to Sparta.

Dr. C. E. Johnson, Tisch Mills to Columbus Extension Hospital, Chicago.

Dr. C. F. Lehnkering, Darlington to Titusville, Fla.

Dr. C. J. Wilson, Goodman to Hiles.

Dr. J. A. Johnson, Rudolph to Mosinee.

MEDICAL RESERVE OFFICERS AND ORDERS TO ACTIVE DUTY.

"How soon shall I be called on to report for active duty?" This question and the uncertainty of its answer has been probably the most trying experience of the civilian physician who has accepted a commission in the Medical Reserve Corps. This uncertainty began on the day on which the commission was accepted because on that day the newly made medical officer realized that he had become subject to call, and must be ready to respond. There was a time in the early weeks of the war when medical reserve officers were ordered out on very short notice, often giving them only one or two days in which to close up their personal affairs. Some physicians, aware of this condition, even gave up their offices, practically closed their business, or made arrangements which they would not have made had they not presumed that they would be ordered out very shortly. These emergency conditions have now passed. No such uncertainty rests on the man who accepts a commission today, for the Surgeon-General's Office has announced that members of the Medical Reserve Corps will be given at least fifteen days' notice before being ordered into active duty. It is quite possible that even more than fifteen days will be given those who require more time in which to arrange their affairs.—*Journal A. M. A.*, Nov. 3, 1917.

DEPARTMENT OF NURSING

Conducted by Miss Stella Fuller, 566 Van Buren St., Milwaukee, Wis. Please address items of news and articles for this department to the editor of the department.

WHO'S WHO.

ISABEL HAMPTON ROBB.

That attitude which we call to mind in the name "prophet" was the particular gift of a woman who was for years one of the leaders in the nursing profession of America. From a review of Isabel Hampton Robb's work and life, the quality which stands out most strikingly, is vision. Many of the movements which have since raised nursing from isolation to a high place in the community life, owe their inception to her.

Isabel Hampton Robb, or I. Adams Hampton as she was then known, was born in Welland, Canada, in 1860. She received a teacher's education in St. Chatherin's, and then, because she thought that nursing offered her greater opportunities in 1881 she entered Bellevue Hospital in New York for training. The effect of her early experience, however, is clearly seen in the emphasis she always placed upon education and correct teaching methods. Her first position after graduation was in St. Paul's Hospital in Rome where she did private duty work among American patients. Other early positions were of pioneer sort. When Miss Hampton was only 26 years old, she became the head of the Illinois Training school, where she made a reputation not only as an executive but as a teacher. Here she stopped the custom of sending pupil nurses on private duty cases, and very much emphasized class and lecture room instruction, extending it from the former one year course throughout the entire two years.

In 1889, the Johns Hopkins training school was organized. The trustees desired to make their institution a center for scientific teaching and for the propagation of good methods, in contra-distinction to older schools where emphasis was placed entirely on practical nursing. This was the very kind of thing at which Miss Hampton was aiming. Her ambition and ability were recognized in her appointment as head of the new institution. She asked for the title of Superintendent of Nurses and Principle of Training School in order to emphasize the importance of her educative function. At Johns Hopkins, the first alumnae association

into which all nurses entered automatically at graduation was instituted by Miss Hampton. She also advocated and prepared the way for the three years nursing course, and advocated the eight hour day which is still to be attained.

When a representative woman was sought for chairmanship of the Nursing section of the Congress of Hospitals and Dispensaries at the World's Fair in Chicago in 1893, it was Miss Hampton who was chosen for the position. Most of the innovations which later played a part in the development of nursing, were suggested at this time,—the American Nurses' Association, Alumnae Association, State Registration, the Journal of Nursing, the Society of Superintendents of Training Schools. Some years later the Organization of United Alumnae Associations was formed, and Miss Hampton then Mrs. Robb, became the first president.

A plan very dear to Mrs. Robb was carried into effect when courses designed to give advanced training to graduate nurses were introduced into the curriculum of Teacher's College in Columbia University. The idea was suggested in 1898 when Mrs. Robb was Chairman of the educational committee of the Society of Superintendents. When the contemplated program was laid before the University authorities, they approved the suggestion, and gave Mrs. Robb authority to carry the plan through. Responsibility for funds was assumed by the Society of Superintendents. In 1904, an effort was inaugurated to raise a one hundred thousand dollar endowment.

In addition to her other activities, Mrs. Robb found time to write several books, among them "Nursing Ethics," "Nursing, Its Principles and Practice," and "Educational Standards for Nurses, With Other Essays."

By her untimely death as the result of a street car accident in the winter of 1910, America was deprived of Mrs. Robb's stimulating leadership. The nurses of the country testified to their devotion by founding the Isabel Hampton Robb Fund for advanced study at their first meeting after her death. Thus Mrs. Robb's most cherished work is carried on in her name.

Up to 1916, fourteen nurses out of fifty applicants had enjoyed the use of the fund. In order to make the donation of more scholarships possible, a vigorous campaign for funds was carried on during the first months of 1916. By April, the

fund totaled \$23,276. Six scholarships are now granted annually instead of three. With the exception of a gift of \$5,000 received from Mrs. Wm. C. Osborne, President of the Woman's Board of Manager of Bellevue Hospital, most of the contributions have been made in small sums. The scholarships have been used for the most part at Columbia University where Mrs. Robb instituted the first course of advanced study for nurses.

THE TRAINING AND THE STANDARDIZATION OF THE ATTENDANT.

BY ANNA L. TITTMAN,

INSPECTOR, DEPARTMENT OF REGISTRATION AND EDUCATION,
SPRINGFIELD, ILL.

The word of Carlyle "the present is the living sum-total of the past" when applied to the subject of training and standardizing the attendant, denote that the present status has been reached by matching necessity against opposition. The phrase of Johnson "the future is purchased by the present" involves a warning that a definite plan of activity should be formulated.

During the period that the nursing profession was making its pioneer struggle for recognition, the campaign plainly advocated the complete elimination of the attendant, as one who jeopardized the lives of patients. The possibility of giving training to the attendant was deplored as a medium of transfer of a little knowledge that is a dangerous thing. One class of workers alone was deemed adequate to care for all of the sick of the universe. Skilled care was thought to be needed by all patients—rich, poor, middle class, as well as the acutely ill, the chronic and the convalescent. By the very excellency of her work the graduate nurse has created a great demand for her services. Preventive medicine and surgery have made the nurse a coveted person. The business and industry of the world are finding her indispensable. On the other hand, the supply of well qualified nurses is keeping pace with the demand. The finished product turned out of the schools for nurses today has doubled that of a decade ago—and this with a constant advancement in qualifications. We hear much about the shortage of nurses, yet a study of calls received at nurse directories will show that the number is adequate to meet the demand of the

financially able, except in times of great calamity or wide-spread epidemic, when, unlike the physician, the nurse may care for but one person at a time. If the number were adequate for epidemics then the problem of great periods of unemployment would be upon us.

The question of supply has resolved itself into one of economy alone, therefore, the attendant working for a smaller income continues to preside over one-half of the ills of the public. Public health nursing organizations and hourly nursing have done much toward supplying satisfactory care for the "other half", as have also well organized hospital schools for nurses. Large special hospitals cannot, unless heavily endowed, afford to pay a respectable wage to a complete staff of graduates, even though the aversion of these graduates to do general duty may be overcome. Conducting accredited schools for nursing in these institutions is almost impossible, because of the lack of variety of clinical material. Affiliated courses for students of general hospital schools for nurses, as well as post-graduate courses should certainly be extensively arranged; however, we cannot expect to dispose of the problem by these means. Then there are the almshouses, the State institutions, orphanages and small general hospitals, which are wholly unfitted for schools for nurses, yet which must care for the sick at the minimum cost. In the home care of the sick, the sliding scale of prices has been tried and found wanting. Since graduates have found it necessary to raise their prices, the attendant is in greater evidence. Miss Goodrich, president of the American Nurses Association says, "The type of the disease, not the pocketbook should determine the care which the patient should have," yet how often do we find this reversed.

And what of the future? Will the need of another set of workers, besides the graduate be diminished? Health insurance laws should include nursing care, but is it not unreasonable to suppose that the graduate's salary will be paid throughout a prolonged illness? We may hope at the best to have graduate nursing during the most acute stage, with the attendant to follow during the convalescence, or for chronic ailments. State institutions for the mentally ill, epileptics, etc., with new additions yearly, are always at their capacity limit. Small almshouses are making a brave attempt to provide nursing care for their sick. County tuberculosis sanatoria are increasing in number beyond

the expectation of the most hopeful worker among you. The act of the State of New York requiring counties of 35,000 or more, to build sanatoria, as well as the Glackin law of Illinois, are giving us fair warning as to the unlimited number of workers which we should prepare. The War-tuberculosis program so ably outlined by Dr. George T. Palmer of the Illinois State Department of Health, cannot be successfully promulgated without added forces. The American Red Cross with an enrollment of over 14,000 highly selected graduate nurses, has seen fit to give instruction to more than 50,000 women, who, if necessary, could serve as nurse's aids, if not for our soldiers abroad, then for the wounded returned, for the civilian and for the little children of every nation who are homeless, parentless, hungry, and destitute. Much of the nursing of the world war is falling into the hands of the American woman. And when the reconstruction period shall come, shall we be found with more work to do than we have persons to do it?

In April, 1914, the American Nurses' Association, The National Organization of Public Health Nursing and The National League of Nursing Education, in joint convention assembled, passed resolutions involving three specific points: First—The acknowledgment of the necessity for two groups of workers and no more—the trained nurse and the trained attendant. Second—The pledge of co-operation in any plan which would provide suitable training for attendants. Third—A plea for standardization and protection of the attendant by law. Thus it is that the mountains of opposition and the pitfalls of prejudice are being smoothed into a plane of toleration. Surely a plan for the attendant, which has been endorsed by more than 50,000 nurses deserves more than toleration!—it merits encouragement, to say the least.

PREREQUISITES, REQUIREMENTS AND TRAINING.

In approaching the recognition of the attendant, let us clearly define her relation to the nurse as well as interpret the future status of the attendant. First—let us accustom ourselves and the laity to apply the name of nurses to the graduate registered nurse alone, and the name of attendant to all others who care for the sick for hire. Second—The attendant, whether student or graduate, should be regarded as a nurse-assistant and never be

allowed to practise without nurse supervision. This is consistent with the general plan of efficiency in business and professional life—the physician has his nurse-assistant, the business man and lawyer have their clerical and stenographic assistants, the editor and author have the proof reader, the engineer has his fireman,—why should the nurse not have an assistant as well, giving her freedom to do intensified nursing and give supervision, just as other specialists save time, energy, and mental power by assigning cumbersome and routine duties to those trained for such things. Thus a high grade of supervision becomes imperative. Let us urge a sufficient number of nurses to make adequate preparation for new responsibilities of organization, teaching, and leadership. The distinct field of the attendant is institutional work, yet should it ever become wise and necessary for her to venture into the home, she should be under the supervision and inspection of public health nursing organization and nurse directories. Third—While the attendant should be an assistant, it is detrimental to the plan to rate her as a second grade or third grade nurse; she should have exclusive identity and should be honored with the privilege of becoming a first class worker in her own particular line. Fourth—The attendant should be trained in the routine duties of the care of one particular disease, as tuberculosis, mental illness, alcoholism, surgical convalescence, medical convalescence, children, infants, etc., thus making of her a specialist. A student nurse acquires skill in the nursing care of a certain phase of illness in a given number of months, as a proportionate part of a three year course. Is it unreasonable to believe that an attendant could not become well acquainted with the routine duties of one disease in a somewhat prolonged course? Specialization teaches the attendant her limitations, it removes all danger of risk, and it co-ordinates with the tendency of the nursing profession toward complete specialization. A specialized attendant's course might also be a substantial basis for procuring credit, should the attendant later take up the training for a nurse. Fifth—The attendant should be more of a teacher than a nurse. By precept and example she must teach her patients the rudiments of simple cleanliness, hygiene, ventilation, proper feeding and proper housing. She should also know how to entertain and amuse patients, as well as to teach games and occupa-

tions. Teaching propensities are of especial value in the attendance of cases of children, the mentally ill, blind, tuberculous, and orthopedic cases. The attendant thus becomes an important educational factor in the prevention of disease.

What should be the prerequisite standard qualifications for a candidate for the attendant's course? In consideration of the facts that the attendant will have less responsibility and more supervision than the student nurse, and that she will be a specialized person, the qualifications need not necessarily be as high. On the other hand, the attendant must intelligently report observations, be a teacher to the patient, as well as complete a comprehensive theoretical course, therefore the qualifications should be reasonably high. An eighth grade education, for which credentials should be presented, should be mandatory. The candidate should be able to read, write, and speak the English language. Knowledge of an additional language would be desirable, since much of our health education must be given to the stranger within our gates. (There should be male attendants, trained for certain types of cases, as alcoholism, but a system of co-education should be discouraged.) There should be a goodly number of attendants from the colored race, especially for the tuberculosis course. The entrance age should be 18 or over—the maximum to be determined by the candidate's general fitness. Physical fitness should be finally determined by examination during the probation period. References as to moral character should be procured. The Superintendent of Attendants should also conduct a very careful interview and thoroughly test the candidate throughout the probation (which should be at least 4 months) as to her spirit for the work, her contact with patients and her general attitude. I deplore any system which does not give the Superintendent of Attendants the privilege of selection, either with or without the approval of the Board of Directors. Should the entrance qualifications be determined by the Civil Service, the Superintendent of Attendants should conduct the examination and should be vested with sufficient discretionary and disciplinary power to control the school and to maintain a high standard.

Since there is a marked similarity in the details of organization of schools for attendants and schools for nurses, the present standard of efficiency of the latter, reached after years of struggle,

should be a guide and inspiration to the former. A large portion of the schools for nurses have been organized with but one motive i. e., procuring nursing service at an infinitesimal cost—may schools for attendants avoid this pitfall! A high quality of candidates obtained at the sacrifice of numbers is imperative if the plan is to succeed. Since we may reasonably expect to have small classes at first, how then may an adequate staff be maintained? There is but one solution and that is to issue a diploma of graduation by examination, under a period of waiver, to attendants that have given a number of years of faithful service. As entrance requirements for schools for nurses advance to four years of High School in all states as in the State of Maryland, the number of candidates for attendant's course, will increase and qualifications will advance accordingly. There are even now and there will always be a desirable group of women who will find a ready substitute in the attendant's course, should the nurse *training be prohibitive because of lack of qualifications, finances or family responsibility.* It is moreover, very probable that the universal qualifications of student nurses will be advanced more rapidly, because hospitals wholly unfitted to maintain schools for nurses, yet maintaining them for reasons of economy, may abandon their schools by using graduate attendants under graduate nurse supervision at a similar cost. Average schools for nurses may more easily keep their student personnel at a high standard when they may reduce the number of students, filling the vacancies with graduate attendants.

A fairly good remuneration must be advocated for student and graduate attendants. In consideration of relative value of an attendant and a graduate nurse, and the fact that economic independence is quite characteristic of the type of woman to enter upon the attendant's course, the following schedule is presented:

1st—4 months (probation) \$15 per month and maintenance.

2nd—4 months \$20 per month and maintenance.

3rd—4 months \$25 per month and maintenance.

After graduation \$40-\$60 per month and maintenance.

The length of the course should be one year—not more nor less. A greater length of time would be too heavy a contract on the part of both student

and school from the stand-point of value given for value received. A complete course could not be given in less time. An institution providing a desirable course, at the expense of great effort and money, should have the reward of continuous service for one year, thus preventing frequent disorganization. None but the person with serious intent will attempt or last throughout a course which demands a year of concentrated effort.

Both the theoretical and practical course should be arranged in three semesters, each 16 weeks in length, thus establishing the credit system, recommended by the Legislative section of the American Nurses' Association, as a uniform standard for all states, in regulating schools for nurses. Each semester should bear a relation to a year in a nurse school and students should be admitted three times a year, that there may always be a class of advanced students enrolled. Three semesters of 16 weeks each aggregate 48 weeks, thus allowing 4 weeks for Christmas, spring and summer vacations, and miscellaneous holidays. In practice one unit of credit is allowed for 16 weeks of practice of eight hours per day, aggregating three units for the year of practical work. In theory one unit of credit is given for 16 hours of instruction, for each hour of which there must be two hours of preparation given. The attendant's course of theory should consist of a total of ten units, four in each of the first two semesters and two in the last semester. This will require four hours instruction per week in the first two semesters and two hours per week in the last. Such a system gives collegiate significance and establishes a basis for giving credit should the attendant later be accepted into a school for nurses.

A suggestion for the practice phase of a course in Tuberculosis Sanatoria follows:

THREE SEMESTERS—SIXTEEN WEEKS EACH.

TOTAL—THREE UNITS.

Supply Room	}	
Linen Room		
Diet Kitchen		(4 weeks)
Wards and Private Rooms		(20 weeks)
Out patient Dept. including field service		(8 weeks)
Laboratory		(4 weeks)
Dressing and Examining Rooms		(4 weeks)
Vacations and Holidays		(4 weeks)

A suggested course of theory in Tuberculosis Sanatoria is as follows:

FIRST SEMESTER.

Sixteen weeks—Four classes per week.

Care in Tuberculosis.....	16 hrs.	1 unit
Dietetics	16 hrs.	1 unit
Hygiene	16 hrs.	1 unit
Anatomy and Physiology.....	16 hrs.	1 unit
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Total	64 hrs.	4 units

SECOND SEMESTER.

Sixteen weeks—Four classes per week.

Care in Tuberculosis.....	16 hrs.	1 unit
Bacteriology	16 hrs.	1 unit
Materia Medica	16 hrs.	1 unit
Social Service	8 hrs.	$\frac{1}{2}$ unit
Ethics	8 hrs.	$\frac{1}{2}$ unit
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Total	64 hrs.	4 units

THIRD SEMESTER.

Sixteen weeks—Two classes per week.

Ethics	8 hrs.	$\frac{1}{2}$ unit
Sanitation	8 hrs.	$\frac{1}{2}$ unit
Invalid Occupation and Entertain- ment	16 hrs.	1 unit
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Total	32 hrs.	2 units

A thorough system of daily and permanent records of theory and practice should be inaugurated at the outset, as well as an adequate system of filing candidates' credentials. The diploma should specify the units and subjects and should indicate the specialty of the attendant. The course of training outlined for tuberculosis courses may be made applicable to any other type of school for specialized attendants with very little alteration, such as substituting for class work in the care of the tuberculous, class work in the care of insane, or children, etc.

For the successful execution of this program, the type of institution with which the school shall be connected is of vast significance. The idea of a central school for training a large number of attendants connected with large hospitals for special diseases or large hospitals with departments

for special diseases, is not merely the ideal but the only logical plan. The following points are considered absolutely necessary in any institution conducting a school for attendants:

(1) The hospital organization must be on a firm financial and business basis (an endowment for the school is ideal).

(2) There must be an abundance of clinical material.

(3) There must be a sufficient number of well paid competent instructors and supervisors (a rate of one to six is advocated).

(4) Thoroughly equipped class rooms must be provided.

(5) Comfortable and attractive housing is imperative.

(6) A social director is of great importance in developing the personality of individuals and for the general culture and moral tone of the school.

STATE STANDARDIZATION.

Contrary to the opinion of a few contemporaries that "the time is not ripe for legislation" and "that recognized standards must be established before bringing the matter before legislators", I believe that legislation is the only efficient means of establishing standards, worthy of recognition. Legislation will place responsibility where it rightfully belongs and will protect the public, the nurse and the attendant. Legislation will prevent commercial and correspondence courses from springing up over night and will prevent the shrewd and unscrupulous from using the "necessity of War" as a mantle to cover their exploitation of unsuspecting would-be nurses.

A law governing attendants should provide for their registration upon graduation from recognized schools for attendants and for a system of fixing standards of maintenance for schools and also provide for state inspection. The law might be effectively administered by the same board or committee appointed to administer the nurse practice act.

Formerly state practice acts governing the various professions so greatly magnified police protection and restriction that standardization was kept in the background. But the present day method of administration reverses the order. For

example, the State of Illinois has recognized the educational features of all registration laws in that widely sweeping piece of legislation known as the Civil Administrative Code, fostered by Governor Frank O. Lowden, which has consolidated the administration of the laws governing the registration of fifteen different professions and trades with State Normal Schools, etc., into a huge arm of the state government, known as the Department of Registration and Education. Such a system as this will inevitably raise professions and trades to a higher plane and will deserve a place among the achievements of political science.

In conclusion you are strongly urged to give the subject of training and standardizing attendants earnest thought and wide publicity that no time may be lost and that any prejudice which may still hover about the uninformed may be removed. *Heads of large tuberculosis sanatoria should immediately set to work establishing schools while heads of small sanatoria should demand that attendants be trained by large institutions for the benefit of small institutions.* Such a plan as is proposed, if carried out with wisdom and caution, will result in a boon for hospitals, will give the nurse a full realization and expression of her worth, will bestow upon the attendant a dignified vocation and a better citizenship, and finally will be the fulfillment of our earnest hope and grave responsibility—adequate care for all of the sick.

NEWS ITEMS AND PERSONALS.

The Wisconsin Anti-Tuberculosis Association with the co-operation of the Wisconsin University and several Milwaukee Social agencies is giving a four months' course in Public Health Nursing to seniors of accredited Training Schools for Nurses. Formerly, these courses were given to graduate nurses only.

The demand for nurses who are trained to do school work, tuberculosis nursing, and other lines of Public Health Nursing far exceeds the supply. It is hoped that this plan of interesting students in their senior year will help to relieve the situation.

The course is given under the direction of Miss Stella Fuller, Supervising Nurse of the W. A. T. A., assisted by Miss Dorothy Phillips, a graduate of Wellesley College.

The order of Dominican Sisters has opened a Hospital in Kenosha. The new institution is called the St. Catharines Hospital. It has a capacity of twenty beds. A Training School has been started.

Miss Anna Amunson, a graduate of St. Mary's Hospital, Green Bay, has taken charge of the Shawano Hospital.

Mrs. A. L. Northam, Supt. of the Milwaukee County Hospital Training School, attended the annual meeting of the Wisconsin Federation of Women's Clubs in Madison. Mrs. Northam was a delegate from the Wisconsin Association of Graduate Nurses.

The pupil nurses of the Milwaukee County Hospital are buying a \$500 Liberty Bond. When paid for the bond is to be given to the Alumnae Association of the Training School. There was a special meeting of the Alumnae Association on Wednesday, Nov. 7th. The members spent the evening doing clerical work in connection with the sale of Red Cross Christmas Seals.

Mrs. Celia Dame who has been connected with the Milwaukee Visiting Nurse Association for the past two years has taken charge of the Children's Infirmary in Wausau.

Miss Meta Albers, a graduate of Milwaukee County Hospital, has gone to Janesville to do public health work.

Miss Inav A. Fowler, a graduate of Columbia Hospital, has been employed to do school work in Oshkosh.

Miss Edith Young, who has been a worker in the Milwaukee Health Department for several years, has been engaged to do community work at Ashland.

Mrs. Lorraine Hart has accepted the position of head nurse at the Winnebago County Tuberculosis Sanatorium.

The State League of Nursing Education, recently organized as a section of the Wisconsin Graduate Nurses' Association, held its first meeting at the Columbia Hospital October 30th. The first meeting was devoted to completing details of organization and to discussing ways and means of relieving the shortage of nurses which is bound to occur in Wisconsin when the Base Hospital is called. Mrs. A. L. Northam is President and Miss Florence Prouty is Secretary of the League.

There was a Halloween costume party at the Milwaukee County Nurses' Club House Oct. 29th. The large old fashioned rooms of the club are well fitted for entertainments.

BOOK REVIEWS

FIRST LESSONS IN SPOKEN FRENCH FOR DOCTORS AND NURSES. By Ernest H. Wilkins, Algerton Coleman and Ethel Preston. The University of Chicago Press, Chicago, Illinois. Price 50c.

This little book is one of the most excellent little teachers among the many of its kind which the presses are issuing at this time. As it fits any pocket it is easily carried about for use in spare moments.

PRACTICAL TREATMENT. Volume IV. By 76 eminent specialists. Edited by John H. Musser, Jr., M. D., Associate in Medicine, University of Pennsylvania; and Thomas C. Kelly, M. D., Instructor in University of Pennsylvania. Desk Index to the complete set of four volumes sent with this volume. Octavo, 1,000 pages, illustrated. W. B. Saunders Company, Philadelphia and London, 1917. Cloth, \$7.00 net; Half Morocco, \$8.50 net.

In this volume the treatment of disease is brought as nearly up to date as it is possible to do in any text book composed of the writings of many authors.

Many of the articles are only a page or two long and supplement the previous article written by some other author or the same author who may in the past year or two have changed his views somewhat. Some articles are complete in themselves in this volume. Chief among these are, Typhoid Fever, Nephritis, Splenectomy for Anemia, Diseases of the Blood, Acidosis in Children, etc.

The treatment of all diseases so far as we have read in this volume is characterized by a sane, conservative attitude on the part of all authors. This is particularly shown in the article on Chronic Peridental Suppurations (*Pyorrhoea Alveolaris*) where *Leishmania gingivalis* is not heralded as the sole cause of the disease, nor is the use of emetin hydrochloride systematically urged upon the profession.

Altogether this System of Treatment seems to have struck a new note in text book making. It was about time that some radical changes were made in our text books to conform to the modern ideas which have developed out of the laboratory and clinic. We feel safe in recommending this to any physician and we feel that he will derive real information from most of the articles.

NUTRITION AND CLINICAL DIETETICS. By Herbert S. Carter, M. A., M. D., associate in clinical medicine, Columbia University; associate attending physician to the Presbyterian Hospital; consulting physician to the Lincoln Hospital, New York.

Paul E. Howe, M. A., Ph. D., assistant professor of Biological Chemistry, Columbia University, New York.

Howard H. Mason, A. B., M. D., instructor in diseases of children, Columbia University, New York; associate attending physician to the Ruptured and Crippled Hospital, New York. Lea & Febiger, Philadelphia and New York, 1917. Price \$5.50.

We are climbing up the wave of scientific feeding just at present. The crest has not been reached. In the climb there is much written to spur us along and help us over the top. One of the recent aids is the book now being reviewed.

After an Introduction the book begins with Part I, Foods and Normal Nutrition. This is handled in five chapters. One criticism which seems just is the use of the terms, calories to the pound. It is recognized that this is done with a purpose, but if authors do not lead the way to the calculation and use of the metric system, we shall never be able to replace our cumbersome weights and measures for the simpler ones.

In Part II, Foods are discussed in nine chapters. Part

III, in three chapters, takes up the Feeding in Infancy and Childhood. Part IV comprises more than half the book and is devoted to the subject of Feeding in Disease. Numerous tables of food values and dietary lists minutely worked out are widely scattered through the text. The book is distinctly valuable and should prove of great assistance to the practitioner.

THE PRESCRIPTION. Therapeutically, pharmaceutically, grammatically and historically considered. By Otto A. Wall, Ph. G., M. D., professor of Materia Medica, Pharmacognosy and Botany in the St. Louis College of Pharmacy; Member of the Committee for Revision of the Pharmacopoeia of the United States, 1880-1890 and 1890-1900; Second Vice-President of the Convention for the Revision of the United States Pharmacopoeia from 1900-1910; Presiding Officer of the United States Pharmacopoeia Convention of 1910; one of the authors of the "Companion to the United States Pharmacopoeia"; Author of "Handbook of Pharmacognosy," "Lessons in Latin," etc. Fourth and Revised Edition. C. V. Mosby Company, St. Louis, 1917. Price \$2.50.

This is a very attractive presentation of the history of the prescription and is in this sense a contribution to medical literature. The author has made quite a book out of an apparently bare subject. The book is in its fourth edition. Its dress is much more elegant than it formerly was, the contents are improved too, so that it is a book which any one might like to own. It should appeal especially to students of pharmacy, but medical students and doctors will find much of interest and of profit in its two hundred and sixty pages.

NOSTRUMS FOR KIDNEY DISEASES AND DIABETES. Prepared and issued by The Propaganda Department of The Journal of the American Medical Association. 47 pages; deals with 34 nostrums; illustrated. American Medical Association, 535 North Dearborn St., Chicago. Paper, 10 cents postpaid.

This is the latest pamphlet issued by The Propaganda Department of The Journal of the American Medical Association as part of its work in giving the medical profession and the public the facts regarding different phases of the nostrum evil and quackery. Nostrums for kidney disease and diabetes are grouped together in one pamphlet, not because there is any essential relation between diabetes and kidney disease, but because the average quack makes no distinction between the two conditions and recommends his nostrums indiscriminately for both. It is not necessary to tell physicians that drugs will not cure either kidney disease or diabetes but it is necessary to apprise the public of this fact. Whatever justification there may be for the sale of home remedies for self-treatment, there is no excuse, either moral or economic, for selling preparations recommended for the self-treatment of such serious conditions as diabetes and kidney disease. Every "patent medicine" sold for the cure of these diseases is potentially dangerous and inherently vicious. The pamphlet is an interesting and instructive one to put in the hands of the layman.

DISEASES OF THE SKIN. By Richard L. Sutton, M. D. Second edition, revised and enlarged. Profusely illustrated. C. V. Mosby Company, 1917. Price \$6.50.

This is a splendid book of some thousand pages. The name of Sutton assures a painstaking, thorough book of merit. The qualities of both paper and printing are excellent. The work is profusely illustrated with pictures that are worth while and clearly show what is intended. These pictures seem to me the outstanding feature of the book. Much attention is also given to the pathology of the various skin diseases. Sutton is well able to discuss pathology and his ability is shown in this work. The table of contents is clear, and with the excellent index make the book a very usable one. References to bibliography at the conclusion of the consideration of every disease are an innovation to be imitated—a detailed study of the original considerations on the subject in hand can be outlined and pursued from the use of these references. If there be any adverse criticism to offer, it is that the therapeutic considerations are not sufficiently detailed. A more lengthy consideration of the treatment of the particular diseases would greatly enhance the value of the book.

C. A. B.

THE MODERN MILK PROBLEM. By J. Scott MacNutt, Lecturer on Public Health Service in the Massachusetts Institute of Technology. The Macmillan Co., New York. Price, \$2.00.

This book provides a convenient survey of the sanitary, economic and medical problems involved in the modern milk question. The book is of particular interest at the present time, not only on account of recent disclosures regarding "price fixing" but on account of its consideration of the various factors of milk production and distribution which are responsible for this very price fixing.

The first part of the book suffers in effectiveness by the presence of much reiteration. The chapter on the sanitary factors involved is extremely interesting. An essential consideration which the author very properly emphasizes is the apparent tendency of sanitarians to render undue importance to minor details, frequently at the expense of making the universal application of the requirements based on these details a thing more to be desired than actually practicable.

The fault has not been so much that standards of milk production have been lacking as that these standards have been wrongly applied. Recent investigations published from the Illinois Agricultural Expt. Station seem to confirm this viewpoint. According to this work, conditions of the barn which have heretofore been considered so important a feature of sanitary milk production, and which has frequently imposed economic burdens incommensurate with the average dairyman's finances—do not play near the important role we had previously thought. More important than whether the cows are contented is the question whether the hands of the milker are clean.

The author advocates the adoption of the North system of sanitary control. This system has been properly tried out and affords a way of producing a good milk at

a sufficiently low cost to make its benefits universally enjoyable. This is something that can not be said of the present system of production of Certified Milk. The successful application of this method depends upon the emphasis placed upon methods rather than on equipment. The dairy score card as revised by North is an important feature of this plan.

In the last two chapters of the book, the author treats of the economic aspects of the milk problem, and of proper methods of solution. He summarizes the plight of the farmer, the position of the dealer in relation to transportation, the attitude of the consumer, the necessity of fulfilling medical requirements and the importance of legislation unobstructed by partisan interests. Failing the co-operation of the various interests, such steps as municipalization might afford a proper solution. A community organization would be productive of economic benefit to both producer and consumer, while legislation enforcing laboratory tests followed by dairy inspection would insure the safety of our milk supply.

A. B. S.

POLIOMYELITIS IN ALL ITS ASPECTS. By John Ruhrah, M. D., Prof. of Pediatrics in the University of Maryland Medical School and the College of Physicians and Surgeons, etc., and Erwin E. Mayer, M. D., former Senior Resident in the Mercy Hospital, etc. Illustrated with 118 engravings and 2 plates. Lea & Febiger, Philadelphia and New York, 1917. Price, \$3.25.

The panic of the recent epidemic of poliomyelitis besides challenging scientific medical thought to greater investigation gave rise to countless absurd theories regarding this disease—these to the contentment of headline compositors but much to the confusion of the physician. Even in reputable medical journals, reports became too numerous for the busy practitioner to follow.

The publication of this volume, comprising all the known data on the subject selected by two reputable observers offers an instructive and very readable consecutive account of this disease.

All the recent investigation of the Rockefeller Institute are here presented, as is also the work done by Mathers, Rosenow and Nuzum on the bacteriology of this disease. The authors treat these latter investigations with an air of pacific conservatism. In giving equal importance to the work of Bull and Kolmer (with their negative results) with that of these previous investigators, the authors of this volume seem to ignore the facts that with the organisms recently isolated by these several investigators, it has not only been possible to "cause lesions" in the central nervous system, but that the lesions so produced are indistinguishable clinically and anatomically from those observed in classical poliomyelitis.

The symptomatology of the disease is given in great detail and thoroughness. Examination of the spinal fluid is almost a sine qua non in the diagnosis. As a general rule, if a patient shows a normal spinal fluid, poliomyelitis may be ruled out.

The various methods of treatment which were advocated during the New York epidemic are considered—

the sum of the results makes us wish for something more certain than has yet been devised. The recent reports from the Mayo Clinic (by Rosenow) and from the Cook County Hospital (by Nuzum), both of which have appeared since the present volume was published are certainly more hopeful than those previously published.

The subsequent management of the convalescent patient demands a nice judgment of the mechanics of muscle balance and is best left to the Orthopedist. The book, however, offers a number of useful special exercises for muscle training which may be utilized when the more expert services of an Orthopedist are not available.

A. B. S.

THE ROENTGEN DIAGNOSIS OF DISEASES OF THE ALIMENTARY CANAL. By Russell D. Carman, M. D., Head of Section of Roentgenology, Division of Medicine, Mayo Clinic and Albert Miller, M. D., First Assistant in Roentgenology at the Mayo Clinic. Octavo of 558 pages with 504 original illustrations. W. B. Saunders Company, Philadelphia and London, 1917. Cloth, \$6.00 net; Half Morocco, \$7.50 net.

Roentgenologic examination of the gastro-intestinal tract is established as a most efficient and helpful means of diagnosis. It cannot be done by the beginner with any degree of accuracy any more than microscopic work can be done. Students of this new aid in diagnosis have been many and have blazed the trail for others to follow.

Books on the subject are not abundant, the science is too new. Drs. Carman and Miller have taken the wealth of material at their disposal and have used it discriminatingly in the preparation of their book.

After chapters on Apparatus, General Technique, and Interpretation, they take up the whole gastro-intestinal tract from the oesophagus to the lower colon. Special chapters are devoted to Gastric Cancer, Gastric Ulcer, and Duodenal Ulcer. Such headings as Chronic Colitis, Chronic Intestinal Stasis and Constipation, Miscellaneous Lesions and Conditions of the Colon are the concluding chapters.

Their point of view in regard to the radiographic findings in constipation and the discussion of the subject appears to the Reviewer sane and sound.

The book is profusely illustrated with roentgenograms of all sorts of lesions.

We are glad to see this book. It fills the bill as a most readable and workable book on the subject. Those who are doing X-ray work on the gastro-intestinal tract will find it very helpful.

THE PRACTICAL MEDICINE SERIES comprising ten volumes on the year's progress in Medicine and Surgery under the general editorial charge of Charles L. Mix, A. M., M. D., professor of Physical Diagnosis in the Northwestern University Medical School.

GENERAL MEDICINE, edited by Frank Billings, M. S., M. D., head of the Medical Department and Dean of the Faculty of Rush Medical College, Chicago, assisted by Burrell O. Raulston, A. B., M. D., resident pathologist,

Presbyterian Hospital. Series 1917. The Year Book Publishers, Chicago, 327 S. LaSalle St. Price, \$1.50.

Vol. II. GENERAL SURGERY. Edited by Albert J. Oehsner, M. D., D. E. M. S., LL. S., F. A. C. S., surgeon-in-chief Augustana and St. Mary's of Nazareth Hospitals; Professor of Surgery in the Medical Department of the State University of Illinois. Series 1917. The Year Book Publishers. Price \$2.00.

Vol. III. THE EYE, EAR, NOSE AND THROAT. Edited by Casey A. Wood, C. M., M. D., D. C. L.; Albert H. Andrews, M. D., George E. Shambaugh, M. D. Series 1917. The Year Book Publishers. Price, \$1.50.

Vol. IV. GYNECOLOGY. Edited by Emilius C. Dudley, A. M., M. D., professor of Gynecology, Northwestern University Medical School; Gynecologist to St. Luke's and Wesley Hospitals, Chicago, and Sydney S. Schochet, M. D., instructor in Gynecology, Northwestern Medical School, adjunct gynecologist, Wesley Hospital, Chicago. Series 1917. Price, \$1.35.

Vol. V. PEDIATRICS. Edited by Isaac A. Abt., M. D., professor of pediatrics, Northwestern University Medical School, attending physician Michael Reese Hospital with the collaboration of A. Levinson, M. D., associate pediatrician Michael Reese Hospital. **ORTHOPEDIC SURGERY**, edited by John Ridlon, A. M., M. D., professor of Orthopedic Surgery, Northwestern University Medical School. With the collaboration of Charles A. Parker, M. D. Price, \$1.35. The Year Book Publishers, Chicago. Series 1917.

These five volumes of this handy review of literature cover very satisfactorily their respective subjects. They are useful in running down recent work and getting an idea of what is being done over the world.

The ten volumes issued yearly cover very well the whole range of Medicine, Surgery and allied branches. The Reviewer can recommend this series to the profession.

THE ELEMENTS OF THE SCIENCE OF NUTRITION. By Graham Lusk, Ph. D., Sc. D., F. R. S., (Edin.), Professor of Physiology at Cornell Medical School, New York. Third Edition, Reset. Octavo of 641 pages, illustrated. Philadelphia and London. W. B. Saunders Company, 1917. Cloth \$4.50 net.

Dr. Lusk in the preface to this 3rd edition says that this is the last he will write. This occasions no surprise when the truly enormous amount of work which must have been put into this book is considered. It is utterly impossible to review such a book adequately. It is hard reading for it is massed with figures. And yet it is fascinating reading for it concerns the very essence of life itself, for without food there would be no life. Life always has been and always will be the struggle to obtain sufficient food to keep the bodies of people in health. A book of this kind has untold value.

We do not expect to give an analysis of this book. It has many chapters, hundreds of tables, and thousands of references. To the Reviewer it seems to be the last word, up to the present time, in the great subject of

Nutrition. It will repay careful study by all physicians and should be in the library added to Pres. Elliott's seven-foot shelf of the essential books for the development of culture.

POLIOMYELITIS (INFANTILE PARALYSIS).

ITS PRESENT PREVALENCE IN THE UNITED STATES.

Occasional cases of poliomyelitis (infantile paralysis) are reported from all parts of the country. This has been so for a number of years. During the present summer, however, the only localities in which the reported prevalence of the disease has been such as to indicate the presence of outbreaks are: Washington County, Vt.; city of Haverhill, Mass.; city of New Castle, Pa.; Allegany County, Md.; Braxton County and Marion County, W. Va.; Rockingham County, Va.; Belmont County, Ohio; and Blue Mounds Township, Pope County, Minn. All these outbreaks have been comparatively small and with but few cases. In no locality in the United States is there an outbreak of any size, or one that seems likely to develop into a serious epidemic.

Allegany County, Md.—In Allegany County, Md., 23 cases of poliomyelitis were reported between July 15 and August 18. For the five weeks ended August 18, the numbers of cases reported by weeks were 7, 6, 2, 3, 5. The main focus was at Barton, where 10 cases were reported in July. The outbreak in this locality seems to be diminishing. The population of Allegany County at the time of the 1910 census was approximately 63,000.

Marion County, W. Va.—Thirty-one cases of poliomyelitis were reported in Marion County up to August 18. The first cases were reported in July. The principal focus was at Monongah, where 14 cases were reported in July and 8 in August up to the 18th. The disease in this locality does not seem to be increasing at the present time. The population of Monongah in 1910 was 2,084. The population of Marion County in 1910 was approximately 43,000.

Washington County, Vt.—In Washington County there were during June, 31 reported cases, and during July, 22. Comparatively few cases have been reported since the 1st of August. The main focus of the disease was in the city of Montpelier, where there were four cases reported between June 16 and June 22, and 29 cases between June 19 and July 7. The next most important focus was in the town of Barrre, where there were 15 cases reported between June 16 and August 18. At Waterbury there were eight cases between July 7 and August 18. The outbreak seems to be on the wane since the latter part of July. The population of Montpelier at the time of the 1910 census was 7,856. The population of Washington County was approximately 42,000.

New Castle, Pa.—In New Castle 4 cases of poliomyelitis were reported between July 1 and July 28. In the next two weeks, ended August 11, 9 cases, and in the week ended August 18, 14 cases. The disease here is on

the increase. The estimated population of New Castle, as of July 1, 1916, is 41,133.

Haverhill, Mass.—In Haverhill 5 cases of poliomyelitis were reported in June, 10 in July, and 16 between August 1 and 22. The outbreak here seems to be still on the increase. The population of Haverhill, estimated as of July 1, 1916, is 48,477.

Braxton County, W. Va.—In this county 10 cases were reported in July and 7 cases during the first 18 days of August. The outbreak in this county seems to be diminishing. The population of Braxton County in 1910 was 23,023.

Rockingham County, Va.—The only county in Virginia in which there has been a noticeably unusual prevalence of poliomyelitis is Rockingham County, where there have been reported since June a total of 33 cases. There was 1 case reported in June, 22 cases were reported in July, and 10 cases since the 1st of August. The cases during July were reported at Elkton, Harrisonburg, Grottoes, and McGaheysville. The disease does not seem to be increasing at the present time. The population of Rockingham County in 1910 was approximately 35,000.

In Greene County, Va., seven cases have been reported since the 1st of August, in Page County six cases since the 1st of July, and in Warren County seven cases since the 1st of August. Of the cases in Warren County, six were at Front Royal.

Belmont County, Ohio.—In Belmont County 11 cases were reported in June and 15 in July. The main focus was at Martins Ferry, where 19 of the cases were reported during June and July. The population of Martins Ferry in 1910 was approximately 10,000.

Pope County, Minn.—In Blue Mounds Township, Pope County, Minn., seven cases of poliomyelitis were reported between June 14 and July 19. This constitutes a markedly unusual prevalence of the disease. The population of Blue Mounds Township in 1910 was 557. The outbreak seems to be at an end.—*Public Health Reports.*

Let the party that bleedeth, chew the root of a nettle in his mouth, but swallow it not down, and without doubt the blood with staunch: for if one keepeth it in his mouth, he can lose no blood.

Wine of the decoction of tormentil, drank daily without any other drink, and the herb thereof sodden, and every evening plaistered over the eyes, for the space of three or four months or more, restoreth the sight: yea, to those that have their eyes as though they did see, and yet are blind, and see nothing at all.

Powder made of the stone of a swallow, given to drink to them that have the falling sickness, healeth them without doubt, for it is a sure experiment.

Seeth sage, and drink it, or stamp it, and lay it to the matrix, for both ways it provoketh the flowers and afterbirthens.

The Wisconsin Medical Journal

Volume XVI

MILWAUKEE, DECEMBER, 1917

Number 7

ORIGINAL ARTICLES

ADDRESS IN MEDICINE.

PRINCIPLES AND POSSIBILITIES IN THE DIETETIC TREATMENT OF DIABETES.*

BY FREDERICK, M. ALLEN, M. D.,

ROCKEFELLER INSTITUTE,

NEW YORK.

Mr. President, Members of the State Medical Society of Wisconsin, Ladies and Gentlemen: In answering the invitation to deliver an address in medicine, I informed the secretary that we were hopelessly involved in getting together our results for complete publication, and asked to be relieved of writing a formal paper, and to be permitted instead to talk spontaneously on the subject, and then, if desired, answer any possible questions. I judged that the members who come to this meeting desire to hear something definite and practical about diabetes, and as far as I am able I will attempt to deliver that sort of a talk.

I think the clearest way will be to put the matter as a principle of treating diabetes, the application of the principle, and the results.

Principle of Treatment. The principle of treatment of diabetes in the past has been on the assumption that it is a disorder of carbohydrate metabolism. Therefore treatment has been directed to eliminating carbohydrate, or the protein which gives rise to carbohydrate, from the diet as far as possible; and low carbohydrate, low protein, high fat diets have been the approved diets for severe diabetes. Opposed to that, however, there has more recently arisen a widespread practice of giving diets notably rich in carbohydrates, viz., the "oat-cure" and similar treatments. Therefore, although carbohydrate is supposed to be the particular poison in

diabetes, it is the very thing that is fed to patients under such conditions.

The new principle in the treatment which we use is based upon a number of animal and clinical experiments which need not be described now; but this principle is that diabetes is a deficiency in the assimilation of all classes of foods, not simply the carbohydrate. The carbohydrate is merely the thing that is most plainly seen as a cause of trouble. The idea of the present treatment is that the normal person can assimilate food, but the diabetic, in proportion as he is diabetic, is unable to assimilate any kind of food.

Practical Application. We come now to the application of this principle in treatment. First may be mentioned the equipment for applying the treatment. The equipment is not difficult or complex; I believe that it is easier to treat diabetes now than it used to be. One essential thing in approaching the treatment of diabetes is an open mind; that is really the main thing to acquire; for while the methods of analysis and of guiding treatment are simpler than they used to be, they are somewhat different, and men must not wish to treat diabetes or to test the condition of patients by the same methods that they learned in medical schools many years ago.

One essential in practical experience, where most practitioners seem to err, is in not prescribing accurate diets. Apparently the majority of practitioners still hand out a diet slip, saying to the patient, you may eat so and so, and you may not eat so and so; but they do not indicate the quantities, nor work out a diet accurately in the different classes of foods. For standard diets it is the modern custom to reckon in grams and cubic centimeters, and in the metric system in general. This system is used not as a scientific fad, but because of the simple fact that it is the only convenient method. As Joslin says, he has never seen a man who reckoned the diet in pounds and ounces, and the sugar excretion in grains and ounces, who really had a clear idea how much carbohydrates the patient was using out of his diet. But if the

*Delivered at the 70th Annual Meeting of the Wisconsin State Medical Society, Oct. 3-5, 1917.

diet is figured in grams, and the urine in liters and cubic centimeters, it can be told at a glance what the patient is doing with his diet. Again, instead of buying books which will give specimen diets, saying to feed this the first day, and feed something else the second day, it is much better to get a book that will give food values and a few of the principles of nutrition and of diabetic treatment, so that you can figure your own diets to suit your own cases and know what you are doing rather than work by rule of thumb.

From the laboratory standpoint we no longer are as dependent as we used to be upon quantitative sugar estimations, or upon ammonia analysis, or upon the elaborate determinations of acetone bodies, or a lot of laboratory work that was really difficult to do when people tried to treat diabetes well under the old system with the former laboratory tests. The most important tests are now those of the blood. It is important sometimes to know the blood sugar. The best blood sugar is an American method; it is that of Lewis and Benedict.¹ It requires a colorimeter, which most physicians will not possess. It has been modified by Epstein of New York so as to make use of tubes as in the Gowers hemoglobinometer. There is merely a standard solution of a red color, and the other solution prepared from the blood is diluted until it matches the standard.² Reports indicate that the method gives sufficiently accurate results for ordinary clinical purposes. Physicians treating diabetes should either be equipped to determine blood sugars themselves, or be in touch with a laboratory which can make such analyses when required.

For acidosis, the well known ferric chloride test for diacetic acid and the Rothera³ nitroprusside test for acetone are useful as routine qualitative reactions. The Rothera reaction as applied to the blood plasma by Miss Wishart is specially useful for giving a quick idea of the amount of circulating acetone bodies. With mild acidosis, a faint color or none at all is obtained in the plasma, but with heavy or dangerous acidosis a deep color is always found. For quantitative measurements of the acidosis, especially in impending coma, or other crisis, the most valuable methods are not the analyses for acetone bodies or ammonia, but those for carbon dioxide, as well as the Rowntree and Marriott, Sellards and other tests, all of which were doubtless described by Dr. Farmer this morning. Two of these methods may be mentioned at present,

namely, the Fridericia⁴ method for the carbon dioxide tension of the alveolar air, and the Van Slyke method for the carbon dioxide capacity of the blood plasma. The descriptions of these methods may appear complex to clinicians unfamiliar with gas analyses, but in actual fact the technique is so simple that it can be acquired in a very few hours of practice, and an analyses requires only ten or fifteen minutes to perform. The apparatus for the most part is not expensive. As stated, the only difficulty is apt to consist in getting used to doing new things. With this simple equipment a man can approach even severe diabetes with some confidence and at least carry a patient through the first stage, and then, if the case becomes too difficult in the later stage, turn him over to a specialist if necessary.

Now as to the application of this principle to what we assumed diabetes to be. Obviously, if it is a diminished assimilation for food, in approaching a patient with severe diabetes, it is desirable to relieve him of food. The rather natural effect then is that his glycosuria stops, and also that acidosis, instead of increasing, diminishes as a rule on plain fasting. This is the method that we use at the Institute. It is a safe thing to do in fully 90 per cent. of the cases, where we are able to watch the patients closely and carefully. There are, however, a few cases where it is dangerous. Close clinical observation and the laboratory tests for acidosis are very important in determining whether a patient is coming out of acidosis or going deeper into acidosis under treatment. Because of this occasional danger on fasting, Joslin has introduced a modification which has been perhaps more widely used than the plain fasting method. As you may know, his method is first to cut out the fat from whatever diet the patient is taking. That begins undernutrition. Then he diminishes the protein, until it is omitted altogether. Then, if necessary, he withdraws the carbohydrates last; and after this preparation fasting is generally safely borne. This, you see, is the opposite of the old method of excluding carbohydrates first. There are times when carbohydrate is the most dangerous food; there are times when fat is the most dangerous food; and because of acidosis, which is the most threatening danger in approaching a severe case of diabetes, Joslin has introduced this practice of first excluding fat. The choice is therefore open between the sudden and the gradual method.

The principle of undernutrition is the same in both.

Management of Coma. There are three sorts of difficulties that may be encountered in certain cases. They may be classified as coma, complications, and inanition. Coma, of course, is one of the commonest, and acidosis is the danger which most commonly clears up under fasting. As already mentioned, our treatment for impending coma is to place the patient immediately on an absolute fast. I will speak of the results later, but it is important to recognize which type of case it is, whether the patient will develop acidosis on fasting or whether the acidosis will clear up on fasting. To some extent we follow the empirical rule that if a patient has gone into coma on feeding we fast him, and if he has gone into coma on fasting we feed him—without always knowing why. It may not be necessary to feed carbohydrates; perhaps protein is the most important food. Whichever plan of treatment is first tried, carbon dioxide estimations are made every few hours in a critical case, to determine whether the progress is good or bad and whether the treatment should be changed.

Alkali is at the present time a disputed matter. We generally use a certain amount of alkali for coma cases. Dr. Joslin treats practically all of his patients without alkali. One thing is certain, that most cases very close to coma can be treated safely and successfully without any alkali at all. That is to say, they are forming their own alkali with their ammonia, they are neutralizing their acids; and alkali treatment generally offers nothing more than an additional boost. If the patient merely holds on a level for the first day or two, and does not grow worse, especially if the carbon dioxide in his breath or his blood holds even, or rises slightly, he will generally come through safely. In most cases in our experience, small doses of alkali have seemed to bring up the alkalinity of the blood somewhat more rapidly and hasten the return of subjective comfort. But the importance of this movement of minimal use of alkali is to correct the widespread abuse of alkali. In coma it has been customary to pour tremendous amounts of alkali into a patient, sometimes as much as a liter of 4 per cent. sodium bicarbonate or carbonate intravenously at once. Some persons have done this, and have brought some patients through, and fatal results have always been blamed upon the diabetes. When such a dose

as a liter of 4 per cent. bicarbonate solution is injected intravenously through a needle, in perhaps a half hour or three-quarters of an hour, the patient may show no change or may seem a little better in consciousness or otherwise at the end of it. But within an hour or a few hours later he may die very suddenly; and it is not certain that such a death is due wholly to diabetic coma. Edema and small hemorrhages of the meninges have been described as the cause of sudden death after large doses of alkali. In some cases alkali given intravenously probably is beneficial. We almost always give it by mouth. But where it cannot be taken or retained that way, it may be given intravenously. I know of one case in another person's experience, in which small doses of 200 cc. or 300 cc. at a time of 4 per cent bicarbonate, several hours apart, may have been lifesaving. That patient recovered, when he might not otherwise have recovered. But to attempt to take a low alkalinity of the blood and suddenly force it up to normal or above normal by a huge sudden dose of alkali is a dangerous procedure, and is perhaps responsible for a number of the deaths that are attributed to coma. Sometimes a patient will come out of coma if he is just given a fair chance by being let alone. That does not mean the majority. But one rule in coma is not to act in a panic, but to give the patient a chance to do what he can, and simply help him as far as possible in the doing of it.

Management with Complications. The complications encountered in treatment may be divided into the metabolic and the infectious. Among the former, nephritis is no longer a condition that interferes with the treatment of diabetes. When high protein diets were used, there seemed to be antagonism in the treatment; but with undernutrition diets, low in protein as well as in other elements, a complication like nephritis does not introduce any additional difficulty in the treatment. Of course it is harmful from the standpoint of prognosis, but in the treatment the two conditions can be managed simultaneously without one interfering with the other. We had one case of myxedema with diabetes, and for some reason both conditions improved on diabetic treatment, and very little thyroid had to be used. It was perhaps an accident that the myxedema seemed to be benefited by fasting and low diet. Other metabolic complications thus far have not made difficulty in

treating the diabetes. They merely injure the prognosis.

The infectious complications are particularly serious, because the diabetes makes the infection worse and the infection makes the diabetes worse. We have had a few cases with such complications, but not very many. The first serious one that we encountered was a large dangerous carbuncle, and the patient recovered. The mortality with severe infections of the septic type will be high, even when the diabetes was previously mild. To subject a badly infected patient to sudden fasting is a dangerous treatment, and one that needs strict laboratory control. We do it because we are sure of our laboratory control, but it is not a thing to be done blindly. I have heard of a number of patients who died from sudden employment of the fasting treatment where there was severe infection. There is that dilemma already mentioned, the diabetes making the infection worse and the infection making the diabetes worse. Even when they do not go into fatal acidosis, you hear of such patients sometimes fasting for a week or two weeks, not becoming sugar free, and losing strength all the time; and as they grow weaker, of course their resistance to the infection is lower. So it is a very difficult thing to handle. In the majority of cases where they do have a fighting chance, and are treated with laboratory control, fasting is beneficial, to some extent at least. I believe that a treatment directed to the diabetes is highly important in all cases. Even in the midst of the infection the diabetes should not be neglected. It is in all probability a mistake to try to overfeed the patient, and thus make his diabetes worse, in the hope of benefiting the infection. The fundamental principle mentioned is still applicable. If a patient is going into coma, say with infection, high fever, and a severe diabetes that shows little tendency to clear up, perhaps the best method of applying the principle in question is to feed protein. If it is a case of tuberculosis and diabetes the situation appears difficult. I know of patients treated by a tuberculosis specialist with reduced diet; that is, he treated their diabetes in order to make them sugar free; and on the change from over-feeding to a lower diet, which cleared up their diabetic symptoms, he described very decided improvement in their condition, and he thought that they were going to get well of their tuberculosis. At any rate, the death rate from tuberculosis with diabetes

has been so high on the old principle that the new method of under-feeding, keeping the diabetes under control, and giving the patient a chance to work up the resistance of a normal undernourished man seems worth while.

Inanition. The third danger that may complicate a case is extreme emaciation and weakness, perhaps along with dangerous acidosis. The question may be what to do when the patient seems unable to endure fasting. We have fasted such patients successfully, and I have not as yet seen an adult patient who was actually so weak that he could not stand sufficient fasting to ward off impending coma. Children will sometimes present a real dilemma. We lost two of our children who entered in that state. They came out of their coma on fasting, and then had to be fed to prevent death from starvation, and death followed from diabetes. Little children of six years or under are the ones most subject to such danger. But in the older patients it would seem, as a rule, that the intense weakness is more generally due to intoxication than to actual starvation; and in the majority of cases the patient who seems to be too weak to fast, actually gains strength on fasting, because his intoxication is thereby relieved. And there again, if food is absolutely required under such circumstances, protein is probably the best food to give. It is the most important food for keeping up strength, and you are giving undernutrition when you supply only protein, and are therefore benefiting the diabetic condition, so that later perhaps one or two days of fasting may serve, where at the outset a week of fasting might be necessary to accomplish the result.

Diet after Eating. The foregoing are various points in the immediate application of the principle on first approaching a case. Afterward comes the more difficult phase of building up a diet suitable for that patient. It was at one time considered that the difficult thing was to deal with impending coma and acute conditions of that sort. In the long run you will probably find that it is harder to make your patient stay sugar-free than it is to get him sugar-free in the first place.

The more severe cases. It is not necessary for any two persons to apply the general principle in exactly the same way. Our particular routine at the Institute is generally to insist that the patient shall be free from glycosuria for 24 hours. If the

patient comes in threatened with coma, he frequently has a negative ferric chloride reaction by that time. But whether he has or not, after he has been sugar-free for 24 hours, we start him in with ten grams of carbohydrate in the form of green vegetables, and next day we add ten grams, and keep on adding ten grams daily until he shows a little glycosuria, which establishes his limit of tolerance. Various things are thus accomplished. More carbohydrate is assimilated in the absence of other food than in any other way, and therefore any lingering traces of acidosis are generally cleared up by this method, especially if there is any considerable carbohydrate tolerance. Also we have learned the tolerance, and that is useful for two purposes. We have an idea as to what diet can be tolerated. If only 10 or 20 grams of carbohydrates can be taken alone, there is no chance of including carbohydrate in a mixed diet. If 200 grams of carbohydrate is assimilated alone, perhaps 30 grams or 50 grams may be taken with the mixed diet. A standard is also fixed for the purpose of comparison in the future; that is to say, six months hence you can repeat the same test, and see if the tolerance has either increased or diminished. It is a partial fasting. The patient is getting carbohydrate, but he is getting a low total diet, less than he needs, and is thus presumably receiving benefit for his diabetes. Then the glycosuria that appears from this carbohydrate clears up quickly—glycosuria from carbohydrate alone does that. And when with one day of fasting it has been abolished, we then begin with a nourishing diet, generally starting first with protein and increasing up to perhaps a gram and a half of protein per kilogram of body weight. If the tolerance permits, carbohydrate may be given at the same time. Then fat is used as a filler. A man must have a certain amount of food on which to live, and the quantity of food which he does not get in carbohydrate or in protein he receives in fat. The aim is to make the combination such that he shall be continuously free from both glycosuria and acidosis. If you give too much fat he will have acidosis; if you give too much other food he will have glycosuria; and if you are dealing with a patient of very low tolerance, who seemingly cannot take enough carbohydrate to prevent acidosis on the least quantity of food necessary to live, then the plan is to undernourish him until he does reach that stage where he is free from symptoms on a diet which is ade-

quate for his body weight. The less he weighs, and the more undernourished he is, the smaller the amount of food on which he can maintain himself. Thus the severest cases have to be content with a low diet in order to remain free from symptoms. We aim to hold the blood sugar normal. Whether that is possible in every case will have to be left to the future for decision. In some of the most severe cases it is very difficult; but it is an ideal to be aimed at. Without such thoroughness of treatment in the severest cases, especially in young people and in children, there is going to be trouble as a rule. It may not be an ideal state when they are undernourished, but they are going to be a great deal worse off if they are not undernourished.

Mild Cases. We come now to the milder cases, even to prophylaxis, and the question is sometimes asked, when a man becomes sugar-free very easily, sometimes by the simple omission of sugar, or potatoes, or bread, is it necessary to starve such a man? Must he have the treatment that is used for severe cases? Here again apply the same principle. He need not fast, need not go through any special program; but if he is diabetic he has a diminished assimilation for food in general, and his general supply of food should be diminished. Under the old principle, the extreme of caution would be to exclude carbohydrate; a carbohydrate-free diet would be the way to prevent diabetes, or to treat mild diabetes most effectively. But if diabetes is diminished assimilation for all classes of food, then the prophylaxis or the treatment for mild cases is to cut down the general food supply. We give these mild cases as much carbohydrate as we can, and we cut down their fat especially, and give them a low calory diet. Most of you are familiar with the work of Chittenden, and you can think of a modified Chittenden diet for these mild cases. He holds that low diets are the ideal ones for all people. Most authorities have not accepted such a diet as the ideal one for the population in general, but it has been proved that men can remain apparently normal, can do their work and be vigorous and enjoy life on diets very much lower than most persons take. A diet which will reduce a man's weight by 10 or 15 pounds, and which will supply fewer calories than most of us take, is probably the ideal diet for preventing diabetes in the case of a person predisposed to it, or for treating the milder cases. There is no need for the rigorous

program in these cases that is used in the severe cases, but the principle of undernutrition is the same.

Results of Treatment. We now approach our own results with this method. We have had altogether about a hundred cases of diabetes, from which we have selected 76 for publication. This number has been chosen to include all cases received up to sixteen months ago (so as to afford at least this period of observation for all living patients) and also all the fatal cases in the entire series to date. On the basis, therefore, of the 76 cases thus selected, we have a mortality of 33 cases, or 43.4 per cent. This is a high mortality, and undoubtedly much higher than would have resulted if there had not been so many mistakes in carrying out the treatment. Nevertheless, it must be judged in relation to the character of the cases chosen for treatment. The effort has religiously been made to select the worst cases that could be found, and a large proportion of the patients received when close to death have evidently had both life and comfort prolonged by many months. Also the cause of disaster in a considerable number of cases has been breaking diet; but these also are included, because the treatment must be tested not merely in its application to a few selected cases who will serve as experimental models, but for its adaptability to human nature in general, the kind of patients that everybody must meet and treat. For this reason, especially in the earlier years of the work, patients were selected solely on the basis of their diabetes, without regard to intelligence, self-control, financial ability, or anything else that is necessary for treating diabetes successfully.

Results with Coma. Here again the experience can be classified under the three divisions already mentioned, coma, complications, and inanition. The history with coma is 20 deaths. Eight of these deaths occurred under treatment; the others occurred in patients who broke diet and were away without treatment at the time. I may say that we took the kind of cases that mostly die in coma. Two old persons have broken diet, and have suffered merely impaired health. With these exceptions, every patient who broke treatment is dead, and all but one of them died in coma. Of the 8 cases who died in coma under treatment, two died respectively in 2½ and 7 hours after entering the hospital. There was thus little chance to treat

them at this stage; it was too soon for fasting to be effective, and alkali does not as a rule save such cases. Two of the cases were those of the children whom I have already mentioned, who were too weak to stand the necessary fasting; they had to die, either of acidosis or of starvation. One patient died of fasting acidosis, before that condition was understood. Fasting was persisted in, notwithstanding warning symptoms, and the patient died unnecessarily. Such a result is readily avoided by proper management of the fasting. In one case the diabetes was so severe that treatment failed to check the impending coma. In certain other instances there has been trouble from infections. In two instances at least patients came out of coma in the presence of infection, and died of the infection and not of acidosis. Out of 21 patients who entered the hospital with coma present or impending, 7 died and 14 recovered. By impending coma is meant dyspnea and dangerous drowsiness, with the chemical findings in urine which warn of fatal acidosis. To have been successful in two-thirds of the cases seems satisfactory, in view of the very bad prognosis in diabetic coma. The ideal way to treat coma is to avoid all acidosis from the outset. We are able to say that none of our treated cases have gone into coma. The principle of treatment is to keep acidosis entirely absent, and this result means simply that the principle has been carried out successfully in this respect when the patients have proved faithful.

Results with Complications. The second group mentioned comprises complications. We have had 25 cases with important complications, chiefly infections. Twelve were present at admission, and 13 developed during treatment, at one stage or another. I mentioned the pneumonias that recovered. One girl of 19, with very severe diabetes, developed pneumonia in the course of her diabetic treatment, and came through successfully. There was one carbuncle and two cases of appendicitis. One of the appendicitis patients, who was in the hospital, recovered under treatment; one outside of the hospital died of a perforated appendix. Out of 8 deaths from complications, 4 were probably attributable to the diabetes. With these few exceptions there have been no complications in the treated patients. This we believe to be one of the most important things accomplished by thorough treatment of the diabetes, from the standpoint of the death rate and of the comfort of the patients. The

great majority of the complications described in the older text-books can be avoided. Even the freedom from pruritus means a diminution of the skin infections, which have always been so common in diabetes.

Results with Inanition. The third subject is weakness and inanition. This is perhaps the first thing thought of in connection with a fasting or undernutrition treatment. Many persons seem to have feared that if they controlled diabetes by fasting and undernutrition, they would have to keep on starving their patients, who were thus doomed ultimately to starve to death instead of dying suddenly in coma. In general this fear has proved groundless. We have lost five patients from what might be called inanition. One of these is the one who broke diet and did not die in coma, but lived on candy and cake to such an extent that she simply wasted away and died, practically of starvation, instead of the usual acidosis. Two of these patients were the children previously mentioned, who died because they were too weak to stand the fasting required to bring them out of coma. Another was an unusual case of diabetes, which treatment ultimately failed to control. For nine months there was a continuous choice between starvation and coma; and death finally resulted. In almost all cases the outcome of the fasting treatment, as regards strength, seems to be in the direction of greater strength. When the patient is already weak and emaciated, it may not be possible to make him well-nourished and strong, but he can generally be made stronger than he was before, if he is treated correctly. At any rate the most important benefit of treatment is to check the downward progress and save the patient from growing steadily weaker.

Fidelity of Patients. Finally, there is the question of the willingness and fidelity of patients in regard to following such a treatment. How many will consent to undergo what has been called the "starvation treatment," and how many of them will be faithful when they are kept more or less hungry and are not allowed to eat their fill. Our experience indicates that the reliability of patients is greater than on the former treatment. You are aware that diabetic patients have been the notorious liars and thieves of medical literature. It has always passed current that a diabetic's word could not be trusted regarding diet, and that he would

steal any food he could lay hands on. That is still true to some extent; it is a failing of human nature, when people are hungry; but fortunately it is not true in the majority of cases. The great majority of our patients have consistently followed the diet; and they were not picked on the basis of special trustworthiness. Nearly all of those who broke diet were of the sort who would not follow any diet, no matter how liberal. They were either too ignorant, or too lacking in self control, or in a few instances were more or less insane. We now have some patients following diet faithfully who used to break the old-fashioned diets regularly. Some of them were chosen with the idea of testing that very point. The reasons for this difference can be explained as physical and psychic. On the psychic side, if you have a patient sugar-free, if you prove to him that he can remain free from glycosuria and acidosis, and let him make his own tests and see for himself how things work, and if he realizes also that a violation of diet means a fast-day, it is a big incentive to him, he forms the habit of doing things right, he feels better, and has confidence that he can prevent glycosuria and that it pays to be careful. This applies even to the children, who, as a rule, make splendid patients. This feeling of confidence and encouragement is a very important factor in securing fidelity to diet. On the physical side, in the first place the patient with active diabetes is frequently too neurotic to be trustworthy. This nervous condition frequently goes with severe diabetes, and controlling the diabetes frequently improves the nervous state. The simple hunger that accompanies undernutrition is far easier to endure than either diabetic polyphagia or the specific carbohydrate hunger that results from diets too rich in fat.

State of Health under Treatment. In closing, it may be well to discuss the results from the standpoint of comfort and of the actual prolongation of the life of the patient. As to comfort, I have already mentioned relief from complications, and, on the average, greater strength than the patient enjoyed before, but not a return to health or normal strength in the severest cases. This treatment should not be regarded as a cure of diabetes; it is a palliative method, a means of control, a plan of giving rest to a weakened function. Sometimes a patient recovers to a very marked extent, and is practically indistinguishable from a normal person, so long as he follows his diet. The worst cases,

those with extreme emaciation and practically no carbohydrate tolerance, perhaps after many years duration of diabetes, do not improve to the extent of becoming like normal persons, and some of them never gain any appreciable carbohydrate tolerance, and can stay alive only by remaining very thin and very much below normal in strength. Opposed to that group is the group of earlier cases. The prospects are doubtless best if the diabetes is genuinely mild. But even the severe and acute cases, including those in children, are generally characterized at the outset by the ability to improve markedly in tolerance and to live in a condition of reasonable strength and comfort on a varied and satisfying diet. How long such patients can live is a question which the future must decide. It has always been a question whether children with diabetes could grow and develop. The answer has generally been in the negative. But if such patients are taken early and treated thoroughly, it is not yet known what their ultimate fate will be. We have some children who are apparently doing well, and who cannot be distinguished from normal children by their looks or behavior. They have as yet shown no downward progress on proper treatment.

Some other children in our series received wrong treatment, in that their acute symptoms were cleared up at the outset by fasting and undernutrition, and subsequently undernutrition was abandoned and they were allowed diets limited in carbohydrate but high in total calories, practically as under former methods of treatment. The growth and development hoped for from such diets did not result. What did result was the usual relapse and downward progress, with loss of the original high tolerance; and such mistakes have been responsible for most of the deaths in this type of cases. The moral is that fasting does not cure diabetes, and children thus far have shown no greater power of recovery than adults. Continuous undernutrition in all three classes of foods is necessary, in proportion to the severity of the diabetes. The earlier and milder the stage at which efficient treatment is begun, the more liberal can be the diet and the more favorable the prognosis. I believe that is the main point which I can leave with you today, that for the general practitioner the highest duty in diabetes is early diagnosis and early and efficient treatment. And if you cannot control the case yourself, then it belongs in the hands of a specialist, who will give it the necessary thorough control.

If you bungle it and treat it badly for several months, even though maintaining freedom from glycosuria, you may find at the end of this time that the carbohydrate tolerance is greatly diminished, and, still more important, that the peculiar power of improving and gaining tolerance, which belongs to the early case, has been lost forever. The only cases that we have seen that have not been able to improve have been those that have been badly treated for a considerable time. In the past we have taken chiefly patients in the extreme stage, and have endeavored to keep them alive as long as possible. It is important to learn to what degree the power of recovery may extend in early cases, especially in children, and accordingly in how good condition they can be kept and for how long a time. It will be a considerable time before the observations in this direction can be completed.

As I stated before, I will try to answer questions if there are any present who desire to ask them.

DISCUSSION.

CHAIRMAN: It has been a time-honored custom not to discuss the principal addresses in medicine and surgery, but as Dr. Allen has been so cordial in his request for questions, if there are any to be asked they will be given a place at this time.

DR. EGAN: I would like to ask the doctor, if there is any starch-free food, or starch-free product, or nearly so, that he recommends as a proper food if they complain—the patients complain that they do not get enough to eat. Do you have any particular food that you recommend? If you recommend any particular food how long do you diet, or do you use those at all?

DR. ALLEN: That is a thing I should have mentioned. When the diet must be very low, it is often advantageous to allow certain quantities of what we call thrice-cooked vegetables. That is, low-carbohydrate vegetables, such as spinach, celery, asparagus, cauliflower, etc., are boiled three times in abundant water, changing the water each time. So little carbohydrate then remains that for practical purposes we count such vegetables as having no food value at all. Under proper conditions they can be used in even the severest cases. Another useful material is bran. From a mill or feed-store is obtained the coarsest bran, as free from starch as possible. This is tied in a cloth and washed under the faucet until the water comes through clear. It is then mixed with sufficient agar to hold it together, and is baked in the form of muffins or flat cakes like toast. It is tasteless, but hungry patients relish it along with soup, bacon or other foods which furnish the taste. I have been trying lately to arrange for some form of cellulose flour, which shall have no food value but can be used for thickening soup,

omelets or other foods, or for mixing with our flour in certain cases; and I have hopes that some miller will succeed in producing such a preparation.

DR. H. P. GREELEY, Waukesha: I should like to ask Dr. Allen what his opinion is of the use of alcohol?

DR. ALLEN: That is one of the things that I left out, on account of shortness of time. Our first cases, as you will recall if you look up the publications, were the ones that I mentioned coming in almost in a state of coma, largely of the type presenting the combination of extreme weakness and dangerous acidosis. We employed whiskey in a number of these cases, and it does seem to add strength to some extent. The effect upon glycosuria or acidosis is not great, but we have some observations which will be reported later. Alcohol was never, as some persons supposed, an integral part of the treatment. Most of our patients do not receive whiskey. Wherever possible, we give them nothing but soup, coffee and bran during their fast. In the subsequent diet we generally avoid alcohol, unless the patient is so addicted to its regular use that he would be uncomfortable without. The reasons for not using alcohol are two: first, that the habit should be avoided, just as in well persons; second, that alcohol must be reckoned among the total calories, and since the total calories must be restricted, it is preferable to give them in the form of solid food.

DR. EGAN: In some of these cases where you give the carbohydrates, do you sometimes find that you can give them plenty of butter, but by giving them cream you get sugar? Do you find that they can take other foods with the same amount of carbohydrates, where the cream produces sugar?

DR. ALLEN: I do not know for sure whether it is more common with cream than with other foods; but in the severest cases we have sometimes found it necessary to omit cream.

DR. L. G. NOLTE, Milwaukee: I should like to ask a question in relation to increased exercise for the burning up of the products, or rather you might say, the carbohydrates in the system. What do you think of that in cases where the patient is still able to get about?

DR. ALLEN: As a rule we use exercise for our patients. There are only a very few cases that are made worse by exercise. In all but the severest cases it will burn up some carbohydrates. I think the essential benefit is that if patients exercise they may be able to take a larger proportion of carbohydrates in their diet. But if an increased total diet is allowed on account of exercise, it will finally be found that burning up calories by exercise is not actually the same as withholding them entirely. That is, if 2,000 calories represents the limit of assimilation, and 3,000 calories be given, with exercise sufficient to consume 1,000 calories, the benefit is not the same as though the diet were limited to 2,000 calories, and trouble will result finally, but not as quickly as if the 3,000 calories were given without exer-

cise. In actual practice we employ exercise for the beneficial effect upon the general health, not upon the diabetes.

DR. NOLTE: One more question. You know in the past the old dietist used to largely exclude milk entirely, I suppose on the principle that it contained sugar of milk. I have never cut out the milk, and I have had better results in my cases by giving milk than in the cases where it was excluded. In fact, I lean largely upon my milk value. I would like to hear from you on that point, in a general way.

DR. ALLEN: I think the advantage of the milk diet is in the undernutrition. You are giving low calories, and you are giving carbohydrate and thereby clearing up the acidosis at the same time. We have not used milk in severe cases, except in children; and in children we always give it when possible.

DR. EDWARD EVANS, La Crosse: You say the limit of tolerance. You mean by that that it is a matter of trial yet, you cannot lay down any scientific rule?

DR. ALLEN: You can make a guess from the carbohydrate test. There is no positive way of predicting it in advance.

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1. Lewis and Benedict, Jour. Biol. Chem., XX, 1915, 61-72.
 2. The Epstein instrument with instructions is obtainable from Ernst Leitz, 30 East 18th Street, New York City.
 3. In the Rothera test, a small quantity of urine in a test tube in saturated with solid ammonium sulphate. Three or four drops of a fresh 5 per cent solution of sodium nitroprusside are then added, and finally a few drops of ammonia. A violet or permanganate color develops within a few minutes if acetone is present.
 4. Fridericia, Berliner klin. Wochenschr., LI, 1914, 1268-1270.
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Take a living falcon—the kind known as a “Kite”—and bury it while living in a heap of horse-dung. Let it stay there for forty days.

Remove it and from the maggots that shall grow therein make a salve. Rub this well into the joints. If thereto is added a portion of dog fat, and goat's dung, or if a portion of it shall be eaten, then shall it never fail of cure. (Paullini.)

A REVIEW OF THE HISTORY OF THE DISEASE NOW KNOWN AS GOITRE.*

BY HORACE M. BROWN, M. D.,

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The absence of any true conception of the normal or pathological anatomy of these tissues of the neck, from the beginning of medicine, up to the time of Wharton, in 1656, and the persistence of the humoral theory of the causes of disease, from the time of Hippocrates, a theory that has its adherents even now, accounts for the uncertainty of the ideas in our profession as to what was and what was not disease of the thyroid body, and the inclusion of all the forms of tumors about the neck, under the name of Bronchocele, or Struma, for so many centuries.

An examination into the question as to what knowledge was possessed by the medical world as to the character and cause of the disease known by so many names, naturally divides itself into a discussion of three periods in the history of medicine.

I. That period which includes the works of Hippocrates, and the physicians of the Alexandrian school including Aristotle, up to the beginning of the XVIth century when for the first time an effort was being made to eliminate theory from fact in matters relating to the anatomy of the human body.

II. The period from the time of Vesalius and Eustachius, in the first half of the XVIth century, up to the time when, in the fourth decade of the XIXth century, Cruvelhier proved the thyroid body to belong to the group of ductless glands. This may be called the speculative period.

III. The period of Reason; founded upon the use of the microscope and the tests of the chemical and biological laboratory. This period includes the classification of a separate and distinct type of the disease, namely, Exophthalmic Goitre.

Although we find that Aristotle has given a most exact description of the anatomy of the neck, particularly of the trachea, and the vessels surrounding it: a description more accurate even than that of Mondinus, sixteen hundred years after him; or even as regards the rings of the trachea, more correct than either Galen or even Vesalius, yet he

makes no note of the thyroid body, nor does he make mention of anything that might be considered to imply any knowledge of the disease affecting that part of the body. (De Partibus Animalium, III. cap. 3; De Collo, et gula, et Arteria, etc.)

Hippocrates seems to have considered Goitre to be among the deformities of the body, or to have combined goitres among the scrofulas or struma. However we find among his writings a number of observations that may not be without interest. Thus in his Lib. de Glandulis, he states that "Most diseases of the glands are not primary within themselves, and that when the glands of the neck become diseased of themselves they become tubercular and produce struma and the body is attainted with fever." In the same book we read, concerning the matter of which humor affects them. "If it be the pituitions, and much in quantity, and the fluxion is slow, then they become inflamed, and inflammation with stasis of the humor exists generating the worst form of struma."

In Lib. de Affectionibus, he says, "Fever and Strumae, lumps, bile, and carbuncles arise from the pituitions humor, and to whomsoever is of the bilious nature, I give this treatment. He who is bilious, is purged of bile, if he be pituitious he is purged of his mucous, if he be atrabilious, of his black bile, if hydropic, of his water."

In his aphorisms he says, "Children are most apt to develop strumous glands," and in his book of prognostics, "Strumae after the 42nd year up to the 63d year do not develop."

In Praedictiones, Lib. II. sec. 2, he states that certain conditions may produce tumors which undergo changes causing swellings which contain a honey-like material, which swellings are called Melicerida. (Lipomata.)

Celsus. Liber V. Cap. XXVIII.

De Struma et ejus curatione.

Liber VII. Cap. VI.

De Gangliis, et Meliceride, et Atheromate, et Steatomate Capitis tuberculosa.

Lib. VII. Cap. XIII.

De Cervicis vitiis, et curatione.

(In this chapter he treats of goitre under the name of Bronchocele.)

Among the pre-Christian writers we find that Celsus, so far as I have been able to discover, was the first to make a distinction between the various forms of tumors of the cervical region, and although he has failed to make a clear classification, yet he has in his chapters VI and XIII of Liber VII separated the idea of struma from the other

*Paper read at the annual meeting of the Wisconsin State Medical Society, in October, 1917.

tumors, treating of Struma in Liber V, Cap. XVIII.

In Lib. VII, Cap. VI, he treats of Meliceridin (fatty tumors) Atheromata, (sebaceous cysts that have become dilated), and Steatomata (compact lipomata).

In Liber VII, Cap. XIII, he defines a bronchocele as a tumor "under the skin between the skin and the larynx which is fleshy only, or may contain a sort of honey-like substance, sometimes even containing small bones and hairs mixed together."

He recommends that a straight incision be made in the mid-line of the neck, if there is fluid in the tumor it is to be evacuated, and if it be entirely fleshy it is to be pulled out of the wound with the hand and treated with liniments, "but," he says, "it is easier to remove it with the scalpel." Further it is to be removed with its covering (capsule-velamentum), and the wound to be treated with vinegar and salt. It is difficult to come to any conclusion as to whether he made any distinction between the true tumor of the thyroid and the branchial cyst or the hydatid, and whether he means to advise his operation of enucleation only on the tumors which were cystic, or to the entirely fleshy tumors. It is certain however that he did not entirely discriminate as between the true goitres and other tumors of the tissues of the neck.

Later in his dissertation upon these tumors he advises that the wound should be sutured.

Vitruvius (A. D. 30), the great architect of the time of the Emperor Augustus, knew about goitre, for in his Liber VIII he not only notes the character and the effect of those waters that produce goitre—he is writing upon the subject of the construction of aqueducts, and potable waters—but he also remarks of other waters which contain nitre, which waters by their purgative qualities diminish the size of these strumae or goitres.

"Praecipuam vero facultatem nitritis in purgationibus, ut strumarum quoque inflationes comminuant."

Galen (128-201).

We do not derive as much information from Galen as it would seem, from the extent and all-embracing character of his writings, we might expect.

In his book, "De tumoribus praeter naturam," he speaks of "Choeras" as being struma, and evidently classifies it as differing from any disease of the thyroid, since he says it also attacks the testicle

when it is called "sarcocele." Under the head of such "tumors contrary to nature," he in no instance mentions Bronchocele or makes any mention of fleshy tumors of the neck, but in Book IV, Cap. 6, De locis affectis, he shows himself perfectly familiar with the anatomy of the recurrent laryngeal nerve and its functions, and warns against incision of it, and in Cap. VII, speaks of the pressure of tumors upon the wind-pipe as a cause of aphonia.

In his other books, ex alia, De Methodo medendi, ad Glauconem, De Flobotomia, and De differentiis Moribus, he speaks of all the forms of tumors mentioned by Celsus, and of others under the names of "nodi," Naptae," "Natae," but without sufficient description to enable one to conclude that he made a clear classification as to the tumors of the thyroid and of other tissues.

Aetius (Cent. V-VI) described the bronchocele in no doubtful terms (Lib. XV, Cap. 7) and seems to intimate that the term, in his mind, defined a definite form of tumor involving the gland in front of the trachea, and in Lib. XV, Cap. 13, he evidently means to speak only of "those monstrous tumors which arise in the throat from the cortex of the arteria aspera (larynx); and advises operation upon them, as well as treatment by external applications and liniments.

Paulus Aeginitae (Cent. VII), Lib. VI, Cap. XXXV: "Struma which the Greeks call choeras, is a hardened gland growing principally in the neck, or others in the groin. The name in Greek refers to hogs since they are prolific and bear many offspring (pigs) or since they have glandulous necks." Strumae develop in the parts of the neck or in many parts at the same time, or some in one side or in both.

All of the membranes are included, as in steatomata, atheromata, and melicerides.

"Some of them are painful to the touch, are aggravated by the application of medicines, are malignant even like those forms that are called by some Carcinodas, and it is to be noted that such are not to be cured by treatment by the hand (surgery). But such as are mild to the touch may be operated upon in the following manner. The superficial tissue and skin being divided by a straight incision, and the surrounding tissues being separated, the margins of the wound are drawn apart with hooks, the membranes are to be stripped away and the blood vessels treated as we have described in

treating of angiologia; the tumor is to be little by little, released and removed."

"Also the bigger strumae, being lifted out with hooks and suspended, the membranes everywhere surrounding them are to be separated and the tumor removed. With the utmost care we should see to it that neither the arteries, which are called 'the Carotids' nor the recurrent nerves are injured. And if some vessel interferes with the work, it is to be bound about with a cord, or cut through the middle unless it be too large. Now when we have reached the narrow base of the struma, the one to the right is first to be cut off, and then with the index finger deep down in the wound we are to try to find out if there are strumae close by, which in the same manner may be turned out. But if we believe there is any great vessel, or even many, deep down in the struma, we are not to cut it away from its base, but it is to be bound about with a cord and at a point above any danger, excise it freely (sponte) and then with medicines applied on linen, the cure is to be attempted. If it be cut off, we must draw the edges together so that they are everywhere in contact, and if there be no superfluity of tissues, fasten them together with pins. But if there be too much flap after the removal of the struma, we bring it together in the shape of a myrtle leaf and sew it with sutures and inject healing or stimulating medicines." This certainly looks like an operation for thyroidectomy.

In Lib. VI, Cap. XXXVIII, he says:

"Concerning the tumor of the neck which is called Bronchocele."

"There may be a large and round tumor in the front of the neck, deriving its name from that interior part, which the Greeks call Bronchon."

"This tumor may be of two forms, in one the fat or soft parts swell; this kind belongs to the family of the abscesses, which the Greeks call Steatomata, the other is derived from dilatation of these parts and this we must remember, and avoid it, for if it be an aneurism, it is most dangerous, just as are aneurismata in other parts of the body, and those are especially dangerous which develop about the neck, on account of the size of the blood vessels."

"If the tumor be but the swelling of the fat, it should be treated in the same manner as we have described in the treatment of steatomata, the vessels separated, and then the tumor removed just as we have described in exposing the struma."

This is certainly good advice and seems applicable to goitre. Alexander of Tralles (Cent. VI), makes but slight mention of the tumors of the neck, yet he speaks of the large fleshy tumor of that region found among people of certain mountainous countries, and in the "Canons of Mesue," (Cent. IX), (who was the physician to Haroun al Raschid, the Caliph of the tales of the Arabian Nights,) in the commentaries upon the work, by Petro d' Appono (1250-1320), and especially in the "Additiones" of Franciscus de Piedemontis, we find a pituitous tumor of the neck described under the term "Frigula" which is evidently a term meaning goitre, for to all three of these men "Frigula" was "a large separate growth in the front of the neck" which they thought to be incurable, and sometimes call it Botium.

Rhazes, who, in the IXth Century wrote the famous book on Smallpox and Measles, was familiar with the tumor, and recommended operation after a long period of hygienic and medical preparation, by the knife or by escharotics.

Haly Abbas, who flourished in the Xth Century, defined the tumors of the neck in accord with the ideas of Celsus, and recommends a multitude of remedies for the disease, but all that he tells us is so much better told by Avicenna in his Canons that it will be taken up under the head of his contribution.

In the Canons of Avicenna (980-1036) we find under the head of Struma, a description of the individuals suffering from this disease in which it is stated that because of the shape of their necks being comparable to that of a pig, to them has been given the name, "scrofulous," from a word in Greek signifying a hog.

A long account of the growth of the true tuberculous glands (scrofula) is followed by a description of a growth in that part of the neck, which may well be considered to be an enlargement of the thyroid, and in the description of the operation for its removal, a warning is given that the recurrent nerves must not be injured lest the voice be lost. (Liber IV, Fen. III, Tract. II, Cap. I, et seq.)

In treating of Steatomata, Atheroma and Melicerides he follows Paulus, and Rhases, Ibid. Cap. 4 and 5.

Albucasis (Cent. XI) divided these growths into a number of classes. Some were "Natural," some "Unnatural." Some "Hereditary," some "Ac-

quired." Some with involvement of the veins and arteries, some without, or very little. Some in accordance with their contents as Steatomata, Atheromata, Meliceridin, and others made up of soft flesh.

He gives directions for the operative treatment of each of these forms, but regrets that in his time there are few surgeons who are bold enough to undertake such operations.

Indeed this seems to be his complaint as to other surgical conditions, for he says the same about trephining the skull. (Lib. II, Cap. 45.)

One searches in vain among the amusing chapters of the first great anatomist of the mediaeval period, Mundinus (1260-1325), for anything that relates to the glands of the neck, but what are we to expect, when his methods of dissection were about as follows as to the soft tissues. He says, "Behind the veins," speaking of the anatomy of the arm and hand, "you will notice many muscles and chords sufficiently large and thick, in regard to which it is not worth while to make a demonstration upon a fresh cadaver, but rather upon one which has been exposed to the sun for a period of three years, and upon such a body, these may be clearly demonstrated."

But in the midst of it all one finds a ray of light that illumines one point of his knowledge that has a direct bearing upon the disease under consideration, for he notes the origin and distribution of the recurrent laryngeal nerves, in his chapter on the epiglottis. He recognizes these nerves under the name of "the nervi reversivi."

He says: "And these then are called the nerves of the voice, or reversive nerves, since indeed they are the principal things in the origin of the voice. And Haly Abbas in his Liber Totius, defines their purpose, and ascribes their arrangement as recurrent, as being because they are the origin of great motion and hence strong and thick, since they must be strong and hard, for the harder the nerve the greater force it exercises. These nerves begin in the soft tissues of the brain, and the longer they are the harder they become, so they first pass to the heart and then loop back of the glottis, growing harder as they grow longer. And further the nerve must be looped to the heart and back again, because the voice springs both from the heart and brain."

Leoniceus (1429-1524) says: "Whether this tumor belongs to the class of steatomata, atheromata or melicerides is doubtful, but it ought

rather to be referred to the class of growths which the most recent writers say were formerly called "turbæ natam," or "naptam". He considers that they are "generated from thick phlegm, as is rheumatism, which phlegm is joined and combined with a material derived from the black bile, causing induration of the phlegm by its dryness, and thus such a bocium is generated in many instances." All of which is as clear as mud.

Valescus of Taranta (1360-1420), thinks that the tumor is phlegmatic, mixed with a black bile descending upon the neck, where it becomes thickened, congealed and hardened, and this is brought about by the long drinking of cold water, especially that which is derived from melting snow, as is the case among the people of the Alps.

Fernelius (1497-1558) cannot see the pathology in that light, but wisely advances a theory, namely: "The bronchocele is produced from a thick and soft phlegm or pituita which slowly and gradually descends from the head and its external parts by way of the portions behind the ears." This seems to the unprejudiced observer as good a theory as the other.

Valescus believed that when the tumor was large it was incurable whether it were hereditary or natural, even with the knife; while Arnoldus de Villanova (1230-1313), he of the famous school of Salerno and the "Regimen Sanitatis," seems to have had other experience for he recommends as follows: "Incision or corrosion to dissolve or extirpate the bocium of the neck is to be avoided, but a bocium, in the beginning, or that has existed for not more than a year may be cured by diet, and dissolving and resolving remedies." (Vide Forestius. Op. Om. Obs. Chirurg. Lib. III. Obs. XIII. et Scholium.)

Quoting from Andreas Baccius. De Thermis. Venice. 1571, 4to. Liber V. pag. 282. line 40.

"Ac fluvius e proximis montanis ortis totus illius saporis est, quem Salza idcirco nominant. longe apud Boemos in Danubium mittens. Ac recta per hunc tractum, Salsburgum civitas, atque oppidum Salza. Hinc multis locis (scribunt novis authores) strumosi fiunt homines, maxima vero mulieres, earundem (ut putant) aquarum vitio, quas bibunt." Which may be Englished about as follows:

"And the waters of the river which flows out of these mountains, has a taste, for which reason it is called Salza, and this water goes far into the country of the Bohemians, carried by the Danube, and

is carried directly by the city of Salzburg, and the town of Salza.

"Here in many places (as the new authors write) the people are strumous, but the women more than the men, because of the evil of the waters (as they think) that they drink."

Bacchius notes that it is not possible to conclude that the tumors which are produced in the neck of the men and especially of the women in the Alps, the pyrenees, and in other hilly countries are due to any of the conditions of water, winds, soil or other elements, but that they are the result rather of taking into the body from all these sources, of an excess of Gypsum (lime). For he finds that those who drink from lakes and wells are as subject, in these regions, to *Hernia Gutturis*, as those who drink only from springs.

In another portion of his book he makes mention of a number of places in the Italian and Spanish alps, especially the "Val d' Oca" where almost everyone suffers from goitre, and assigns as the cause of this condition the drinking of the waters of the hills which contain lime (Gypsum). He notes that not all of the waters contain this substance, and that it is probable that also the water that comes from the melting snow may be the cause of the disease.

In proof of this theory he states that the disease is common in Norway, Germany, among the Sarmatians and Scythians while it is never seen in Syria, Africa, Arabia, Persia, India, or among the Troglodites.

We have seen that Mondinus gives no description of the glands of the neck; but a short examination of his work on anatomy, although it was the authority for two hundred years, and the one work on that branch of medicine that every student of our art was, in many countries, obliged to read and study before obtaining his doctoral bonnet, gives us a very correct idea in regard to the state of learning of the medical world as to anatomical knowledge in his time.

We have now arrived at the period in the study of the subject when we shall perceive that a more exact knowledge was desired among the medical fraternity and we may now consider the work of the men of the earlier half of the XVIth Century, and see what they and their followers had to say about the glands of the neck; for without an understanding of their steps in anatomical investigation, we shall not be able to follow the course of the

growth of knowledge in regard to the diseases affecting those parts.

In the figure VIII of plate XXXXI, Eustachius (1490-1570) figures the thyroid gland as situated somewhat too high upon the trachea, and as having a thick isthmus with poles extending well upward toward the base of the tongue, and he calls it the "Glandula laryngea."

The plates of Eustachius were engraved in the year 1552, and were never published during his lifetime. They were meant to be used as illustrations for a great work on anatomy, which was written, but which has been lost. It was not until the year 1713 that these plates were found, and published at the expense of Lancisi.

They are in many ways a great advance upon the work of Vesalius (1513-1564), who gives in his plates fourteen views of the trachea and larynx, but in none of them does he show the thyroid gland with the slightest approach to its true figure. Vesalius' plates were made for his great work on anatomy, of the year 1543. I have been unable to find a good or even approximately good illustration of the thyroid, or "laryngeal gland," as it was called, up to the time of Bartholin (1616-1680), who in his work on anatomy, 1670, *Tabula II*, pag. 347, gives a very good picture of it in its normal state, but even his picture is very faulty, while VerHeyen (1648-1710), as late as 1710, figures its two apices pointed downward, and still calls it the "laryngeal gland."

We find that Wharton (1610-1673), in the year 1656 was the first to describe the thyroid correctly, and to give it its name, derived from a Greek word signifying a shield. He describes it as being bilobar and with its two lobes connected by an isthmus at the lower part, but as late as the time of Morgagni (1682-1771) there was discussion of a most violent character in his *Adversaria*, as to whether the gland was unilobar or bilobar, and even he was unable to decide as to whether it possessed a duct or not. He, in company with Malpighi, Wharton and Bartholin, was of the opinion that it exuded a glutinous juice into the larynx and trachea, to lubricate the arytenoid cartilages and the mucous membrane of the trachea; considering that the gland was larger in women than in men, since in the women the trachea was smaller in diameter and therefore required more lubrication, while a woman's voice was softer than that of a man because of the greater lubrication. This idea of lub-

rication was also carried into the physiology of the thymus; that gland being supposed, among other things, to lubricate the arch of the aorta and the vena cava, as well as to serve as a prop for those vessels.

"Bronchocele: a tumor called in Latin 'Bocium' and by some Hernia Gutturia, and considered by some to be a disgraceful deformity, is a large round tumor of the neck, between the skin and the arteria aspera, in which, as Celsus and Aetius say, there is a sort of honey-like stuff, or fat or porridge-like material, occasionally containing small bits of bone and hair intermixed.

"The people of Savoy and of Switzerland, as well as those of the Pyrenean alps, suffer often from it, because of the coldness of the waters which spring up from the rocks of those hills, and which they drink."

Johannes Vigerius (1660), Opera Medico-Chirurgica. M. DC. LIX, page 94, thus defines Bronchocele.

It is clear that he was even at this late date unable to discriminate between tumors of the thyroid and hydatids. Why should he? The microscope had not yet invaded the field of embryology, and what could he know of bronchial clefts, or pilonidal cysts of the neck?

It will be clear to anyone seeking to find data for such a sketch as this, that among other things which should be noticed, an examination of the causes for palpitation and for exophthalmos, as entertained by the older writers, is necessary. The greatest confusion exists among the prominent writers of the XVIth and XVIIth centuries as to the causes of these conditions, but it is to be remarked that Rondiletti (1517) and Cappivaccio (1552) both speak of the presence of tumors as a cause for palpitation of the heart, and that Forestius (1522) refers to a case of "exitu oculorum" as accompanying palpitation of the heart. There are many references in Pliny to tumors as a cause of palpitation, and some of them would be worthy of relation were they within the scope of this paper. Indeed the many mentions made by Pliny of Struma and the remedies to be used for that disease, leads one to believe that some of the cases must have been instances of Goitre.

Among the men who in the beginning of the XVIth century began to oppose the theories of Galen was an Hollander of Alemaer, named Peter

Foreest, or as he was called in his latinized name, Forestius.

He seems to have been a very keen clinician and in his Lib. XI, fol. 41, he makes mention of exophthalmos particularly in those people of humid nature, and of pituitus or cold temperament, but he assigns its cause to straining in child-bed and to constipation. He quotes Aetius, who recognized that oedema of the cheeks and face often accompanied exophthalmos and that this was also sometimes found with palpitation of the heart. But he especially gives as a cause of palpitation, the presence of tumors in the neck, of pituitous character. These tumors he thinks arise from the descent of pituitous matter from the brain by way of the tissues behind the ears into the glands of the neck.

He is inclined to consider that a rapid heart is an evidence of a brave and bold nature and mentions Aristomenes, cited by Pliny, and the case of a bold thief who was twice hanged, both of whom were found to have hair on their hearts, upon autopsy, while the thief also had a large amount of long hair on the back of his tongue.

However in accord with Avicenna, Albucasis, and Haly Abbas, he confounds all these tumors with Struma, while the forms which he calls "talpas" and "testudines," or turtle-shaped growths, he classes with Botium or bronchocele, and considers them to have been tumors of the laryngeal gland. He knew that these were often found among the people of the Alps, and as they were found in Holland, in Denmark, he thought they might be caused by the too free eating of fish.

He recommended that these be operated by means of the knife or by escharotics, and mentions that the Greeks treated them with sea water, and also with brine in which sea-shells were boiled. Here we have an unconscious allusion to the use of iodine. The waters of Adelheid are recommended to be drunk. (And they too contain iodine.) A reference is to be found in Horace, as to the use of brine for various diseases, in the line, "ut melius muria, quam testa marina remittet," testa in this case meaning the covering or shell of mollusks.

There is a very prevalent notion among medical men, that the early medical authorities were a class of men ignorant of much that we now consider to have been the result of the investigations of the past forty years of observation. In this they are, to a great degree, wrong. It is true that the men of the older days were not in possession of in-

strumental facilities for discovery and proof of their conjectures, but in the place of those facilities they were dependent upon the faculty of observation, a faculty in the perfection of which they were far in advance of us. Thus you will find the following in the *Breviarii* of Arnaldus de Villanova, Cap. IIII: "It is to be noted that goitre occurring among youths of 25 years of age or under, in most cases is cured, and especially if they be virgins, whether male or female. For they that are virgins and not corrupted of their virginity are easier of cure. But if they be older than 25 years then the cure is more difficult." Absence from sexual indulgence is especially emphasized, during treatment.

Villanova knew nothing about normal functional hypertrophy of the thyroid, but, as you will see, he was an acute observer of symptoms.

One is greatly disappointed in his examination of the writings of Vidus Vidius (1555), the Florentine who was physician to Francis 1st of France, and the friend and house-mate of the great artist, Benevenuto Cellini, in Paris; in not finding either in his plates for his work on anatomy, or in any part of his voluminous writings, any adequate reference to disease of the laryngeal gland. He figures it in the illustrations to his anatomy as being but an insignificant mass of tissue, hardly large enough to cover one of the rings of the trachea, and situated at a point entirely too high upon that tube. In this he follows Vesalius. He was a most faithful follower of Galen in his theories of pathology, and necessarily has but little to advance in the way of treatment beyond those medical applications of Galen and the tentative operative procedures of the Arabians.

Argenterius (1513), the most prominent of the examples of the opponents of Galen in the first decade of the XVIth century, gives a most learned but most hypothetical disquisition upon the causes of bronchocele, and ultimately, turning upon himself, reverts to Galen and the Arabians for his ideas as to causation and treatment.

In the writings of Sanctörini (1560), we come upon a flash of information as to the anatomy of the gland, in that he describes a middle lobe, the pyriform lobe, and states that there are sometimes three complete lobes, not joined together by any form of isthmus.

The frequency of the incidence of goitre during the XVth century is well emphasized by the draw-

ings of Leonardo da Vinci, who seems to have found an especial pleasure in utilizing these poor deformed creatures as subjects for his caricatures. Toothless or goitrous people being most often sketched by him as notable objects for his satirical or humorous drawings.

De le Boe Sylvius (1614) mentions tumors in various parts of the body. For him pituitous tumors, (goitre) being in conjunction with tumors of the pericardium, are causes of palpitation of the heart. He also considered that the presence of worms in the pericardial sac produced palpitation, particularly if they invaded the tissue of the heart itself.

Della Croce (1550) (*Trattato IV. pag. 71*) gives an excellent description under the heading "nodi", of goitrous growths, confusing his work with the classification of bronchocele, porri, fatty, tumors, etc., with pituitous tumors; and recommends their removal by means of the knife, caustic salves and powders, actual cautery, and other forms of escharotics.

Platner, (1720) writing before the time of Morgagni's books, describes atheromata and hydatids considering them as most likely to arise from the lymphatic vessels under the skin. "Melicerida have their origin in the glands under the skin called by the anatomists' sebaceous glands." Steatomata occupy the cellular and fat tissues. Hydatids he describes fully according to the knowledge of his time, mentioning that some of these tumors contain "hairs, gravel, bristles and bone."

REMEDIES.

In the writings of the ancients and particularly among those of the XVI. Century, one finds numberless remedies advised for the treatment of the whole group of growths in the region of the neck.

It may not be without interest to glance at a few of them just as a matter of curiosity.

Pliny, in his *Natural History*, mentions sixty-nine different cures or remedies for the different forms of struma or tumors of the neck.

Dioscorides makes mention of twenty-eight remedies for these growths, ranging from honey to vipers: faeces of various animals and reptiles, to brine and the shells of marine animals.

The goat seems to have been a very favorite source of cures for many diseases, the products of

his various organs and tissues being much used in the treatment of tumors of all parts of the body. (Indeed the common people, today, and many of the physicians also, pin their faith to goat products from "goat lymph", to the fat of the castrated "Billy", for gangrene of the lungs;) and among the thousands of uses to which he was put, we note that Baricellus, and Mizaldus in the XVI. and XVIIth. centuries, recognizing the difference between fleshy tumors of the neck and tuberculous nodules, recommend the fat of goats and the oil of toads for the former, and if these fail the employment of escarotics in the removal of both. (Zimara, Vol. 1, Pag. 48 and Vol. II, Pag. 47. Antri Magico Medici) (Mizaldus. Centies.)

I can safely assure you upon the authority of Dioscorides and the reports of many others, that "the root of Oxalis, hanged about the neck of them that suffer with the goitre will prove a perfect cure."

Cardanus, (1501-1576) on the principle that goitre is a "disease of a cold and moist nature", recommends the drinking of a distillate of human faeces for its cure".

It would well repay the investigative student of surgery to read the book written by Richard Wiseman, of London, who was physician to Charles II: entitled "Several Chirurgical Treatises. 4to. 1668.

Wiseman's chapter upon "The Kings Evil" is full of wisdom as to tuberculosis, not only of the glands of the neck but also contains much of great interest in relation to our subject.

He gives a most extended description of goitre and even notes its relation to palpitation of the heart. This notation is, so far as my knowledge goes, the first intimation of any recognition of the incidence to the two symptoms of what we now know as Graves' disease, Wiseman having antedated Paré in this connection by more than a century.

Wiseman describes at great length his treatment of goitre by operation by means of escarotics, and speaks of the treatment that was common among the people, of introducing a thorn into or through a goitre, and thereby producing suppuration and dissolution of the growth. However he pronounces himself as being in favor of a dietary for the patient, and the use internally of a pleasant concoction of honey, milk and earth-worms with the many footed worm which I in my childhood used to call ear-wigs (*millepedes*).

A most interesting account of the cure of a cystic goitre is to be found in the chapter upon bronchocele, in the *Pathologie de Chirurgie*, of Jean Baptiste Verduc, Paris, 1720.

He tells the story of a certain Swiss, who had a goitre so large that it hung down over his breast bone and almost caused suffocation.

Upon a certain occasion this man was sent to a blacksmith to have a horse shod. The blacksmith having heated a pointed rod of iron to a red heat that he might burn out certain nail-holes in the hoof of the horse, turned quickly away from the forge, and inadvertantly thrust the hot iron through the neck of the Swiss. The result of which accident was that the cystic goitre was evacuated of its contents, suppuration followed and the tumor disappeared.

But Verduc gravely states that such a procedure should not be encouraged, nor should such a goitre be treated by operation, both on account of the great pain to the patient and because of the danger of death from bleeding.

When Wharton made his examination of the thyroid body, he was by no means certain as to the existence of a communication by means of a duct with the interior of the larynx and trachea, but he was quite sure that, as had been held by Vesalius and Van Horne, it was bilobal and that the two lobes were connected by an isthmus.

The confusion arising from finding supernumerary lobes and the pyriform lobe in certain instances, and particularly the greater frequency of the existence of supernumerary lobes in animals, was the cause of the wrangling in regard to that question between Morgagni (*Adversaria*) and the followers of Herophilus, Vesalius, Van Horne, Diemerbroeck, and Verolius. Galen had pronounced it to be a bilobed single gland, but no author had been able to decide as to its ductless character.

All thought it was a producer of a lubricating material, and Wharton believed its function also to be to "draw away the superfluous humidities from the recurrent laryngeal nerve and to pour them into the lymphatic system, and to serve as a cushion to protect the rotundity of the neck, the larynx and the great mass of arteries of that region." Malpighi (1628-1694) however believed that one of its functions was to mix the fat of the parts with the saliva or lymph and to mollify its

sharpness. Morgagni makes the following decision:

"It is certain that the thyroid is a single gland, but as to whether it possesses a duct or not is doubtful." It remained for Cruvelhier about the year 1840 to establish, after a great number of dissections of men and animals, that there was no duct in any way connected with the gland, and of course with this factor proven, the investigators were provided with a firm foundation upon which to rest exact conclusions as to the nature and function of the gland.

But in the mean time a new factor had arisen in the history of thyroid lesions, which was to open up a collateral line of reasoning and which divided the matter of the nature of those lesions into two paths.

About the year 1788, an Italian named Guiseppe Flajani (1741-1808) of Ascoli, noted the existence (as had Wiseman), of an apparent relation between goitre, palpitation, and exophthalmos. This, as in the case of Wiseman, amounted to but little more than the registration of an observation, for it cannot be said that he drew any conclusion from his notation.

In "Elements of Pathology," written by an Irishman—Caleb Hillier Parry—and published in the year 1815 was found the first rational observations concerning the triad of exophthalmic goitre. He saw eight cases, and Stokes in 1854 brought the attention of the medical world to these observations.

In 1828 Adelman gave a very clear description of the cardinal symptoms of exophthalmic goitre but he did not assign to them any relation, as being pathognomonic of any special disease.

In 1835 Robert James Graves of Dublin (born in 1796), in *The London Medical and Surgical Journal* first correlated his observations upon this disease and again in his "System of Clinical Medicine", in 1843, at greater length. His was the first exact statement in regard to the new disease, and to him undoubtedly belongs the credit for its observation and establishment as a separate pathological condition.

In the meantime a German observer, Karl von Basedow, born in Magdeburg in 1799, (he died in 1854) had been carrying on a series of separate observations upon this triad of symptoms. He reviewed the work of St. Yves (1722), Louis (1774), Bonetus (1620-1689), Demours (1837),

and Pauli (1821). He corrected our knowledge as to the pathological conditions producing exophthalmos, and the other evidences of a dyscrasia, but considered the whole condition to be a "masked scrofula".

But to return to Cruvelhier. As early as 1835 Cruvelhier had proved by careful dissection and analogy that the thyroid gland was without a duct, and by so doing had provided a foundation upon which a number of other investigators were quickly to erect a structure of proven fact.

Hypothyroidism, cretinism, or myxedema were investigated as early as 1850 by Curling, and by Gull in 1875, and Ord in 1877. The latter proved the importance to be attached to the presence or absence of the thyroid in these conditions.

In 1856 Moritz Shiff at the University of Geneva made many experiments upon dogs, and proved the fatality accompanying the total ablation of the thyroid.

In 1882 Jacques-Louis Reverdin at the same University, proved the hypothesis that artificial myxedema could be produced by ablation of the thyroid, and classified the symptoms of hypothyroidism.

In 1883 Theodor Kocher reported the occurrence of what he called "Cachexia strumi-priva", in 30 per cent. of his cases of thyroidectomy. Shiff, in 1884 after losing 60 dogs by myxedema after thyroidectomy, showed that these results might be avoided by re-implantation of a portion of the gland into some other part of the body, and thus laid the foundation for the treatment of hypothyroidism by the use of thyroid extract, and Murray and Horwitz began its use in cases of myxedema and cretinism.

The same year, Horsley's observations made upon monkeys, and the work of Sir Felix Semon along the same line, proved that cretinism, myxedema, and cachexia strumi-priva were identical in character.

The same year the importance of the internal secretion was proved by Shiff, and some of the problems relating to the function of the secretion in its action on other organs of the body were indicated by him.

For what I have said in regard to Exophthalmic Goitre, I am indebted to the classical review of the history of that disease by Dr. George Dock, which appeared in *The Journal of the American Medical Association* in Vol. LI, No. 14, October 3d, 1908, and from which I would not abstract a word, nor add one to it.

The isolation of iodine in the juices of the gland was made by Bauman in 1896, and the importance of this discovery brought to the attention of scientists, who quickly realized the relation of the presence of iodothyronin to the general and local metabolism.

The conception of hyperthyroidism by Moebius was a cherished theory of his and its existence as a pathological entity was proven more by accident than by intention; for Moebius, in 1886, had as a proof of his theory the results of the two cases of Von Rehm, who had operated to remove goitres in two cases, for the purpose of eliminating pressure symptoms, and found to his astonishment, that not only the pressure upon the respiratory apparatus was relieved, but that also the symptoms relating to the heart disappeared, although the relationship between the presence of goitre, and the palpitation of the heart had not been recognized by him previous to the operation.

In 1880, the para-thyroids were investigated and described by Sandstrom and the fatal effects and tetany resulting from their removal was demonstrated by Eugene Gly and by Murray in 1891. Generali confirmed these experiments in 1896.

In 1892 Von Eiselberg made his experiments in transplantation of the para-thyroids. These experiments were repeated by Leischner in 1907, and W. S. Halsted in 1909, and the method of relieving the tetany after removal of these glands, by the use of an extract of the para-thyroids, was established.

In 1908, Voegtlein and McCallum, by experiment with calcium salts, showed that tetany could be arrested by the exhibition of the salts of lime; the relation of these glands to the metabolism of calcium being thus proven.

The history of the last thirty years of the advances in the treatment of diseases of the thyroid, which I have condensed into these last few paragraphs is familiar to you all, and I have not considered it desirable to enter into a long disquisition upon it for the reason that, while it is a most romantic chapter in the history of goitre, it is but one of the illustrations of the advances made in the development of our profession, among the many in the past fifty years. You will find all that I have written upon it, in the *History of Medicine* of Dr. Fielding H. Garrison, told in better and more understanding language than I am able to supply.

This has been but a poor excuse for a History of Goitre, but such as it is, it has cost a vast amount of time and reading, and the elimination of much that would have made it amusing if not of scientific value.

DISCUSSION.

DR. H. C. TRACY, Milwaukee: Dr. Brown asked me to discuss his paper, though after reading his interesting and comprehensive survey of the history of Goitre based on a study of the original sources, there seems very little left to say, except by way of appreciative comment. Certain points in the history of our knowledge of Goitre and thyroid gland may perhaps be emphasized.

The history of anything (race, nation or scientific knowledge) is largely explainable from the essential nature of the thing itself. In the case of the thyroid gland we have an organ without duct or other evident anatomical connections. There is nothing about it to suggest its function. Hence it is natural that the history of our knowledge concerning it is made up largely of speculations. This is shown by the great number of names connected with the gland and its functions and diseases, and by the numerous quotations brought before us by the extensive researches of Dr. Brown.

The apparently random development of our knowledge of the gland and its diseases is, however, not entirely without its thread of continuity. For we find that the Greeks used sea-water in the treatment of the turtle-shaped growths in the neck; Roger of Palermo (School of Salerno), 1180, prescribed ashes of sponges and seaweeds for goitre and scrofula; Forestius, sixteen century, as Dr. Brown has told us, used the brine secured from the boiling of sea-shells.

Another interesting line of development in the history of Goitre is the recognition of locality and the quality of drinking water as etiological factors. Vitruvius, A. D. 30, Bacchius, Alexander of Tralles, sixth century, and others, as Dr. Brown has described to us, all had theories involving these factors. It may be mentioned also that Paracelsus, in the beginning of the sixteenth century, as a result of a study of the Salzburg region, noted the coincidence of Cretinism and endemic goitre.

The investigation of the thyroid from the middle of the XVII century to the middle of the XIX century followed the general scientific trend of the period. Our knowledge of the gland developed along anatomical and histological lines. Dr. Brown points out that Wharton, 1656, was the first to give a tolerable description of the thyroid gland. It took nearly two hundred years to complete the picture. A hundred years after Wharton, Morgagni was much exercised as to whether the gland was single or bilobed. Vater, 1720, seems to have guessed at the thyro-glossal duct and looked upon this as the outlet by way of the median lobe. The great Haller, 1776, however, was unable to find an outlet and classed the organ with the thymus and spleen as organs which elaborate special fluid and pour it into the circulation. Apparently Cruvellier, 1840, was the first

definitely to establish the thyroid as a ductless gland, as a result of a thorough and comprehensive anatomical study.

The fifth and sixth decades of the nineteenth century constitute a critical period in the history of the development of our knowledge of the thyroid; most of the prevailing conceptions concerning it in its different phases had their birth in this period. This was not a mere accident. The general scientific development in the early part of the century had brought about the development of the microscope and its technique. The cell doctrine of Schleiden and Schwann was announced in 1839; Darwin's "Origin of Species" was published in 1859; all this stimulated a vast amount of fruitful scientific work in all lines. In investigation of thyroid in 1841 we find Schwager-Bardellen describing the vesicles of the thyroid as filled with cells. Panagiotades, 1847, however, first described the colloidal vesicles surrounded by an epithelial layer. Streif some years later proved this gland to be made up of closed vesicles and not of branching alveoli. In this period also Simon, 1844, began the investigation of the gland from the point of view of its comparative anatomy. He discovered and described the thyroid in bony fishes, reptiles and birds. This line of investigation, however, brought out another difficulty in our understanding of the gland since the thyroid has practically the same structure in all vertebrates. Comparative anatomy in this case contributes little to our conception, either of its structure or function.

Remak in 1850 investigated the embryology of the gland. He discovered that it arises from an epithelial outgrowth on the floor of the pharynx, which has since been known as the median thyroid. It may also be mentioned that Stieda, 1880, described outgrowths (lateral thyroid) from the fourth gill pouches which add themselves to the median thyroid. It is now, however, generally agreed that the whole gland of the adult arises from a median unpaired growth from the floor of the pharynx and that in the human species at least the lateral thyroid does not exist.

In physiological investigation also the fifth and sixth decade of the nineteenth century are particularly significant. Claude Bernard was working on the glycogenic function from 1848 to 1857. Brown-Sequard excised suprarenal glands from animals in 1856; in the same year Schiff, as Dr. Brown told us, excised the thyroid in the dog. The work of these men forms the basis of our modern doctrine of internal secretion.

Accessory thyroids apparently were first mentioned by Kadyi and Zuckerkandi simultaneously in 1878.

With regard to the parathyroid glands, as Dr. Brown has mentioned, they were first definitely described in 1880 by Sandstroem. It is worthy of mention, however, that Ecker in 1853 first mentioned certain epithelial bodies in the frog; he took them to be parts of the thymus. Leydig in the same year identified them with thyroids; Tolt, 1868, again mentions them in the frog, but considers them as accessory thyroids. Maurer in 1899 finally settled the matter by identifying these bodies with the parathyroids of Sandstroem.

If we may be so presumptuous as to speak of the future, it seems that the road toward a complete understanding of the thyroid gland and its normal and abnormal activities has been fairly opened up, but we are not very far on our way. One of the most promising lines of work is the application of biological methods experimentally.

**Don't forget the 3rd, 1918, Liberty Loan.
Save your money. We must win this war.**

FOREIGN PATENTS TO BE OPEN TO AMERICAN
MANUFACTURERS.

Since the outbreak of the war there has been a shortage of certain synthetic drugs, especially salvarsan and neosalvarsan. As the patents for many of these drugs were owned by German firms, American manufacturers, of course, could not make them. When the United States severed its relations with Germany, it was realized that some provision should be made to supply articles controlled by enemy-owned patents. As early as June, Congress was considering "the trading with the enemy act," then known as "The Adamson Bill," the purpose of which was to confer authority on the President to license American firms to use German patents. In the latter part of September, the "trading with the enemy act" finally became a law.

During this period, Dr. Marston T. Bogart, chairman of the Committee on Chemistry of the National Research Council, was being aided by a special committee on synthetics composed of Julius Stieglitz, chairman, president of the American Chemical Society; Roger Adams of the University of Illinois, M. Gomberg of the University of Michigan and W. A. Puckner, secretary of the Council on Pharmacy and Chemistry. (Shortage of Synthetic Drugs, *The Journal*, Aug. 4, 1917, p. 400.) This committee gathered information as to drugs which were difficult to obtain, and considered recommendations which might be made for the enforcement of the law. On October 30, the Federal Trade Commission held a conference in Washington regarding the granting of licenses of enemy patents, at which the material of this and other committees was placed at the disposal of the Trade Commission. According to reports at hand, the discussion covered questions of manufacture, of control of the product, distribution and price.

The regulations issued by the commission based on the law safeguard the interests of patent owners, who, after the war, are to receive some remuneration for the use of their inventions, and provides that licenses will be issued only where the public welfare demands it—that is, to supply a demand not now being met. In this connection it is well to point out that the number of drugs of which there is a serious shortage is not great. Even in Great Britain—which has a law similar to the trading with the enemy act—relatively few German patents have been turned over to English licensees.—*Jour. Amer. Med. Assoc.*, Nov. 3, 1917.

BANANA AS FOOD.

Numerous digestion experiments were performed by Pease and Rose to determine the food value of the banana. The results of their experiments show that the banana is a useful fruit that can with profit enter liberally into the child's dietary provided it is fully ripe or well cooked. If eaten baked in the yellow stage of ripeness or if eaten raw when fully ripe, the banana makes a delightful and highly nutritious article of food. Its composition does not warrant the use of the banana as the main component of the child's dietary, but it can compete well with other fruits and is decidedly to be preferred to candies. The nutritional value is relatively high, approximately one caloric per gram of pulp; and its carbohydrates, when it is fully ripe or cooked, are not less assimilable than those of cereals and potatoes. In the raw food the digestibility is directly proportional to the ripeness of the fruit. There is no positive evidence that the banana influenced bowel movements. In the many tests there was no suggestion whatever of any deleterious effect from consuming large amounts of fully ripe bananas. Prolonged use of the underripe fruit, on the other hand, developed undesirable symptoms. The banana ought not to be eaten raw until after the brown spots begin to appear. The brown color of the peel, however, should not be confused with the darkening due to bruises. An injured banana is soon invaded by molds and yeast cells. The banana properly handled and allowed to ripen is a wholesome food, uncontaminated by dirt and pathogenic germs even if purchased from the push cart in the congested streets.—*Am. Jour. Dis. of Child. Nov. Abst. Jour. A. M. A., Nov. 24, 1917.*

THE EFFECTS OF WAR ON MEDICAL RESEARCH.

One of the significant effects of the war has been the turning of the attention of laboratory workers from some of the intricate, complex and wholly technical problems of research to those of immediate practical utilization and clinical bearing. These problems include efforts to secure new wound dressings; to discover serums or antitoxins to control the spread and the course of infections; to determine the causes and to discover means of prevention and treatment of those little understood conditions peculiar to the war, such as shell-shock, trench fever, trench foot, etc., and finally, to improve the methods of treatment of the common surgical conditions particularly associated with modern warfare. It is difficult to estimate today precisely the value of the procedures that have been adopted or the theories that have been advanced. The claims made for many of them, in some cases associated with an unfortunate sensational publicity, undoubtedly cause those easily swayed to form a too optimistic opinion. The meritorious virtue of some of the remedies has been lost in the clap-net or mystery that surrounds them. Usually the value seems to reside in some already well known substances

or procedures. While it is not to be regretted that enthusiasm and praise should be attached to the work of those engaged in actual warfare, overenthusiasm and false values should not be allowed to influence the opinions of scientists in an estimation of the procedures associated with the medicine and surgery of the war.—*J. A. M. A., Nov. 24, 1917.*

Between April 1 and November 1, the Army Medical School Laboratory, Washington, D. C., shipped 8,843,047 cubic centimeters of typhoid and paratyphoid vaccine for use by the Army and Navy. Enough typhoid vaccine was shipped to vaccinate 1,051,604 men; enough of the paratyphoid "A" and "B" vaccine to vaccinate 777,352 men. Since July 1, a triple vaccine, including typhoid and paratyphoid "A" and "B," has been manufactured and enough of this has been shipped to vaccinate 1,489,902 men.

ANNOUNCEMENT TO PHYSICIANS, PUBLIC HEALTH AND SOCIAL WORKERS OF THE UNITED STATES AND CANADA.

The Metropolitan Life Insurance Company invites physicians, public health and social workers to make use of its valuable collection of mortality statistics.

These statistics present the principal causes of death among white and colored wage-earners in the United States and Canada. The material covers over ten million individuals for each of the six years, 1911 to 1916. Death rates are available for each race, by sex and by age period.

The Company hopes in this way to aid in the study of disease and disability among wage-earners. It desires to stimulate medical investigation and research. By offering these statistics to the medical profession and to public health and social workers, the Company expresses also its appreciation of the co-operation which it has received from physicians and others who have replied to inquiries and have given detailed information in thousands of cases. This assistance has helped to make the statistics more accurate and valuable.

All inquiries should be addressed to Statistical Bureau, Metropolitan Life Insurance Company, One Madison Avenue, New York City.

A powerful remedy for expelling stones from the kidneys and bladder. Sausages are to be made out of the liver, spleen, lungs, kidneys, testicles and penis of a goat, mixed with coco, cinnamon and honey, and this to be put into the gut of the goat. The dose is two or three of the sausages. This a most marvelous thing, but true. (Michael Pacificus: Lib. I. Methodus Medendi.)

THE WISCONSIN MEDICAL JOURNAL

OFFICIAL PUBLICATION OF THE STATE MEDICAL SOCIETY OF WISCONSIN

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Annual Subscription - - - Two Dollars Single Copies - - - Twenty-five Cents

Address all business communications to THE WISCONSIN MEDICAL JOURNAL, 504 Goldsmith Building, Milwaukee

Vol. XXVI.

December, 1917

No. 7

EDITORIALS

DO YOUR BIT.

THE medical profession of Wisconsin has never faced such grave responsibilities or such problems of readjustment as we will be called upon to meet because of the war during the coming year. It is a time, when to be able to meet the obligations of our country, our duty to the people of our State, and our responsibility to ourselves and those dependent upon us, we must stand and work together as never before. Every County Society at its annual meeting in December should carefully look back over the past year, determine how it has effected the local profession, inventory and study its resources to meet the obligations of 1918, and then plan team work that we at no time may be found wanting.

We must not forget those of our members who have made the sacrifice and given their all to the service of our country. Where possible, they and their families should be remembered during the holiday season, for they have made possible our staying at home.

This, then, is an appeal to each and every member of the State Society who has been left at home to do his bit:

1. Sit down now and write a check for your 1918 dues, and mail it forthwith to the Secretary of your County Medical Society. Do not wait for him to telephone or write you. Beat him to it! the strength and ability of organized medicine to

cope with your problems during the next twelve months depends upon your doing your bit promptly. 1918 dues are payable now!

2. Go to the next meeting of your Society and take an active part in laying plans for the work to be done during the coming year. Lend your aid to some plan for the benefit of those of your colleagues who are in the service.

3. Remember it is team work that will win the war, and this means team work in your every day life as well as in our military establishments. You are a part of the team.

**Don't forget the 3rd, 1918, Liberty Loan.
Save your money. We must win this war.**

WISCONSIN IN FOURTH PLACE.

A REPORT of the Surgeon General issued November fifteenth, giving the number of physicians in each State recommended for commissions in the Medical Reserve Corps, shows that commissions have been recommended for 388 Wisconsin physicians. This is 13.9% of the number of physicians in the State, a percentage which is exceeded only among States having 2,500 or more physicians, by Kentucky, Michigan, and Pennsylvania.

To date there are commissioned in the Medical Officers' Reserve Corps 14,000. About 7,000 more are in process of being commissioned, in all 21,000.

Among 18,000 doctors enrolled in October, about 5,000 had failed to file acceptance of their commissions. 21,000 medical officers are about sufficient for an army of two million men, or about enough for one million in France and one million in training. The indications are that we will train a much larger army and must prepare ourselves to furnish 45,000 doctors. In a recent war rally at the Clinical Congress of Surgeons in Chicago it was stated that one out of every four doctors in the United States would soon be in uniform and perhaps every man capable of bearing arms would be in the service. The magnitude of this war enterprise is not yet grasped, nor the necessary sacrifices of this country yet comprehended.

At a recent meeting of the State Committees of the National Council of Defense, Medical Section, in Chicago, Congress was petitioned to create a Reserve Medical Officers' Corps and to furnish insignia for this rank to all reputable physicians and surgeons over age and those rejected by the Medical Officers' Reserve Corps because of physical disability. Congress will probably consider this matter in December.

Rumor is abroad that the Medical Corps is full and surgeons need not longer apply. This is not true. There is a crying need and demand for the younger men under 35. There has been no lack of men for base hospital positions, but the younger and more useful men seem slow to apply. The young, well trained surgeon with the troops and in first dressing stations bears a strain of day and night service of which older men are incapable. The average age of medical men now in training at Fort Oglethorpe is over forty. War is an activity of youth. To the young physicians our country appeals for the "full sacrifice". Such men are the saviours of our fighters who guard us, our country and our honor. America's young blood is to be staunch by her young surgeons. The call of the blood cannot fail.

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GERMAN EFFICIENCY.

WHEN Ehrlich made his now famous "606" the formula was patented and the product of .6 gm. in an ampoule was sold at retail in America for the modest but tidy sum of \$3.50.

Shortly after the war the price of the product was made still higher until a Mr. Metz of the Farbwerke Hoechst Co., would only dole it out in small lots to physicians who were charged \$4.50 for .6 gm. In the meantime the Dermatological Research Laboratory at Philadelphia made their arsenobenzol, a product much less toxic than the last shipment of salvarsan which was sent to us by the Germans on the "Deutschland." In fact that lot was so highly toxic that many men gave up the use of it. Was that possibly a bit of German frightfulness directed against unfortunates in America? Now we are told that arsenobenzol can be made and sold at 75 cents for .6 gm. with a reasonable profit. Have we not been bled nicely by another example of German efficiency? A product which can be sold at a profit at 75 cents is palmed off on us for the small sum of \$3.50 to \$4.50.

If reports are true we shall no longer be in the grip of a monopoly of German origin. The Rockefeller Institute reports the discovery of an arsenical preparation even better than Ehrlich's "606," which can be made and sold for 5 cents (!!) a dose. We place credence in the report of the efficacy of this new drug for we were told several months ago that such was the case. The publication of the results was delayed until all reasonable tests had proved the usefulness of the new drug known as A-189. Thus is German efficiency in this field broken down and soon we shall be entirely independent of the accursed salvarsan monopoly.

**Don't forget the 3rd, 1918, Liberty Loan.
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THE CARREL-DAKIN TREATMENT.

ENTHUSIASTIC reports of the marvellous results following the treatment of foul suppurating wounds with irrigation of a carefully prepared hypochlorite solution have been much in evidence in medical journals during the past year.

It looked for a time as if all the old, well-tried successful other methods were going to be relegated to the limbo of interesting but useless methods. So raucous have been the advocates and so persuasive that the U. S. Government seems about to adopt the Carrel-Dakin method, in spite of its

intricacies, as the one method for the treatment of suppurating wounds. Here and there feeble voices of protest have been raised, these voices bidding us to go slowly and not be carried away by the zeal of new converts. We note that the protests are no longer feeble but are quite loud and quite plainly heard. Only recently at the Clinical Congress of Surgeons some surgeon was bold enough to affirm that the results with the Carrel-Dakin method were no better than with free incision, excision of damaged parts and sensible dressings.

The Carrel-Dakin treatment has always had a something about it which prejudiced some against it. It had to be done just so and no other way. Cases which were treated by this method in the hands of other surgeons, and which did not get well as rapidly as Carrel claimed they should, were said to be poorly treated. The technique was at fault. The solution was not titrated accurately, the solution did not enter the wound properly, the tubes were too thick or too thin, too long or too short, etc.

We believe with Dr. Bevan that it is a mistake to consider this the treatment par excellence for wounds in war. The method is still experimental. It is valuable beyond a doubt, but before it is given the official stamp it should be tried out by experienced clinicians in conjunction with trained chemists and bacteriologists in the presence of carefully controlled cases. This evidently has not been done as fully as to satisfy some fair-minded skeptics. Until these studies are made the method should be placed where it rightly belongs, as an experimental method to be proved out.

**Don't forget the 3rd, 1918, Liberty Loan.
Save your money. We must win this war.**

PRUSSIANIZING AMERICA.

WE were under the impression that this country is in the world war to make the world safe for democracy. If we understand the English language correctly, we are in the conflict to crush forever the menace of a system based upon blind obedience to a self-constituted supreme power which knows no laws of humanity and breaks all sacred rights to gain its ends. We are in to help make the world a fit place to live in. To make a

world where the insensate ambitions of a predatory, privileged ruling class can never throw millions of men at each others throats. The backbone of the Prussian system, the sine qua non without which no such war could have been fought, was universal military service. Had the Junkers not had the millions of Germans trained and blindly obedient to orders from them, the ruling class, no such catastrophe could have happened. Peoples who control their government do not make war. History proves to those who read intelligently that wars have always been made by a few men to gain power for themselves.

There is a close bond of alliance between the Prussian Junker class and men in this country who have fattened at the expense of their fellow men. Even today there are those who are using the exigencies of the situation to hold up prices and make millions while American men are giving their lives for the cause of Democracy.

Who shall say that there are not men in this country who would abuse power if they had it? Is not our history full of instances where this abuse has taken place? Would not a privileged, protected class in this country use all forces it could for its own selfish ends?

Just now there is a pernicious propaganda being carried on by an organization called the Universal Military Training League with headquarters in Chicago. The League is sending broadcast return post-cards urging people to sign a statement favoring the immediate passage of a bill for Universal Military Training. Is this to come to the American people who are fighting for lasting peace which necessarily includes universal disarmament? Are we to have soldiers at the beck and call of every group of powerful interests to help them gain their ends? The specious argument is made that it will help the youth of the nation to better physical development. It would seem that physical training in the schools and summer camps would be a far better method of developing the nation's youths. Personally, we do not believe in this propaganda. All our energies are now bent upon destroying a system of Universal Military Training. Shall we, a democracy, ape the worst feature of a system which the advancing world finds brutal, inhuman, and atrocious? God forbid!

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PATRIOTISM THAT PAYS.

UNDER this heading appears an article in "The Public" for Nov. 9, 1917, which must make us medical men, particularly, feel a pardonable pride in our profession. The article in question tells of the outrageous profits which the copper companies have made out of the war. In one order for 45,000,000 pounds of copper at the rate of 16c a pound, it is shown that this nets a profit to the Copper Magnates of 100 to 125 per cent. What must it have been when our Allies were buying copper at 30c a pound! These profits stagger us and cry for readjustment. The people of the country who have had their sons drafted for war have also bought Liberty Bonds. Some money from the sale of the bonds will be loaned to our Allies to purchase copper in this country from the copper kings who make 100 per cent profit. While men are conscripted, huge profits in the hands of a few, true blood money, are made with the sanction of some members of the Advisory Committee of National Defense, a body which should, before all else, be over-zealous in the attempt to keep down war profits to a reasonable basis. It is said that although copper was 30c a pound, a price artificially made for our Allies, the copper kings patriotically (sic) reduced it to the U. S. Government to 16c and still had a profit of 100 per cent. During this period of enormous profits, conditions in the mines were not bettered, and the miners had no share in the huge profits. All went to the owners and stockholders of the mines. True patriots (?) all.

It is said that even these profits do not satisfy the copper men. They expect to limit production so as to show the government that the price must be materially raised. In this connection "The Public" says: "Has there ever been a more scandalous and reprehensible attempt of the Big Business interests of a country to hold up the nation under stress of a terrible war crisis? Ordinary traitors are shot without much mercy and without wasting much time on formalities. It is disheartening to reflect that the copper industry is only one of those corporations, the heads of which are carrying on such practices while the working men and women of the nation are asked to give their lives to make 'the world safe for democracy'."

Contrast this sort of patriotism with that of the medical profession. Medical men all over the land have given up positions and lucrative practices, have endured discomforts and hardships, have sac-

rificed themselves willingly in a cause in which they believed, and in loyal support of Uncle Sam. This is patriotism, it rings true. A man gives of himself, more he cannot give. But how about the other sort of patriotism? The sort that cries aloud in the land, shows a mediaeval intolerance to any criticism of its actions and then robs right and left beneath the cloak of patriotic talk?

Fellow-members of the Medical Profession, we should make another fight for freedom, freedom from human blood-suckers. We are all over this land, we have influence. How much longer are we going to sit idly by and witness the exploitation of ourselves, our friends, brothers, sons, and fathers by small groups of "wilful" men," who, like vampires, suck the lifeblood from the nation and fatten on it in this crisis? If this is truly a righteous war then let's help to make it one by doing all in our power to curb illicit monetary profits. Let our slogan be, "Conscription of men *and* conscription of wealth."

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OUTDISTANCING THE QUACK.

IN the Dodgeville "Republic" of Nov. 20th, is an ad. covering over half a page consisting of a letter and testimonials from patients and doctors addressed "To the Stockholders and other Friends of the Dodgeville General Hospital". It is the most blatant bid for patients which we have seen for some time. No Patent Medicine Ad. ever showed more boldness in its effort to capture trade. It tells the Stockholders to get busy and send patients. "If you want us to mail an illustrated booklet to some of your friends or relatives that are suffering from ANYTHING (as we now SUCCESSFULLY treat ALL DISEASES) let us know and we will cheerfully do so." Again "Everyone knows of at least one person suffering from TUBERCULOSIS or CANCER, and can at least send THEM to us. As unbelievable as it may sound, we are curing TUBERCULOSIS and CANCER".

Then follow a few testimonials such as are commonly seen in any Patent Medicine Cancer or Tuberculosis cure, and which can be bought by the thousand, as Samuel Hopkins Adams has shown, extolling the efficacy of the Bio Dynamo Chromatic Method. Shades of old Chamlee, Lydia Pink-

ham, and others, don't you recognize a kindred spirit in Dr. Joslin of Dodgeville who uses Zone Therapy to produce painless labor and diagnose the sex of the unborn child by the Bio Dynamo Chromatic Method? Take off your hat to the marvellous men at the Dodgeville General Hospital. Does not Dr. W. B. Hill of Milwaukee predict a future greater than that of Rochester, Minn.? Does not Dr. Wm. G. Doern, also of Milwaukee, after a thorough investigation pronounce the Bio Dynamo Chromatic system of diagnosis "the most startling and scientific advancement yet discovered in the great field of Medicine"?

We plead guilty to being a back number. We have heard of Chiropractic, of Osteopathy, of diagnosis by blue and red lights, and by various other marvellous means, but this Bio business is a new one on us.

Seriously, are these reputable physicians who thus advertise in newspapers and publish the discredited, time-worn testimonial bunk in order to catch the unwary? Did Drs. Hill and Doern actually write the letters attributed to them? Then what must the profession at large think of physicians who write such testimonials? Is it possibly in the nature of an ad. for themselves?

We commend this to the Council of the State Society at its January meeting for investigation.

PHYSICIANS WANTED!!

ENLISTMENT IN THE MEDICAL CORPS OF THE ARMY IS ALREADY CAUSING A SHORTAGE OF PHYSICIANS IN THE STATE. MANY LOCATIONS HAVE BEEN VACATED, AND SEVERAL FAIR-SIZED TOWNS HAVE BEEN LEFT WITHOUT A MEDICAL MAN. IF YOU ARE LOOKING FOR A LOCATION OR IF YOU KNOW OF A COMMUNITY IN NEED OF A MEDICAL PRACTITIONER TO TAKE THE PLACE OF A VOLUNTEER FOR THE PERIOD OF THE WAR, PLEASE COMMUNICATE WITH THE SECRETARY OF THE WISCONSIN COMMITTEE OF NATIONAL DEFENSE, MEDICAL SECTION, DOCTOR ROCK SLEYSER, WAUPUN, WIS.

ARMY SURGEONS—NOTE!!

THIS JOURNAL WILL BE SENT TO SUBSCRIBERS WHO ARE IN MILITARY SERVICE AT HOME OR ABROAD WITHOUT ADDITIONAL EXPENSE ON RECEIPT OF FULL MILITARY ADDRESS. KEEP YOUR ADDRESS UP TO DATE BY DROPPING A CARD TO THE SECRETARY.

The following are lists of Wisconsin physicians who have been reported on December 1st as being in the Government Service or as having accepted commissions and awaiting call. These lists are necessarily inaccurate and we would greatly appreciate our attention being called to any names which have been omitted or to any names included which should not be. Kindly send corrections to Doctor Rock Sleyser, Secretary, Waupun, Wisconsin.

SERVICE, DEC. 1, 1917.

Aaron, Joe, Milwaukee	Brewer, L. C., Jefferson	Decker, C. O., Crandon
Allen, W. E., Sun Prairie	Brook, J. J., Milwaukee	Decker, H. S., Milwaukee
Amundson, K. K., Cambridge	Brown, R. C., Milwaukee	Dehmel, R. A., S. Germantown
Andrew, C. H., Platteville	Brunls, D., Milwaukee	DelMarCelle, C. C., Neenah
Andrews, C. W., Waupaca	Brunckhorst, F. O., Hortonville	Doctor, W. R., Cazenovia
Angeil, E. D., Milwaukee	Bryant, J. R., Wausau	Dodge, C. H., Clinton
Aplin, F. W., Waukesha	Burns, H. J., Hudson	Douhearty, C. F., Richland Center
Armitage, J. E., Milwaukee	Carter, H. M., Madison	Draper, M. H., Deerfield
Axley, A. A., Butternut	Cary, L. W., Winnebago	Driessei, S. J., Barton
Badeaux, G. I., Spooner	Christensen, J. W., Sparta	Dudeck, D. M., Statesan
Bading, G. A., Milwaukee	Clarke, Chas. P., Janesville	Ebert, E. C., Milwaukee
Baker, G. R., Tomahawk	Clark, T. C., Oconto	Eck, Gustave E., Lake Mills
Bailard, J. A., Hayward	Clark, W. T., Ft. Atkinson	Egan, Doctor, Hurley
Barnes, Edgar, Ripon	Coleman, H. N., Barrow	Egan, Wm. J., Milwaukee
Barnes, H. T., Pewaukee	Combs, C. J., Oshkosh	Egeland, G. R., Sturgeon Bay
Barrett, E. J., Sheboygan	Conley, Jas. G., Darlington	Eggers, H. E., Omaha, Nebr.
Bassier, H. H., Oshkosh	Conley, J. G., Racine	Elliott, R. S., Laona
Bedford, E. W., Sheboygan	Conley, J. M., Oshkosh	Elvis, E. B., Medford
Beeson, H. B., Cornell	Converse, G. L., Webster	Epley, O. H., New Richmond
Bellis, G. L., Wauwatosa	Cooke, Edward P., Milwaukee	Erickson, H. C., Stanley
Bennett, L. J., Ft. Atkinson	Cooksey, R. T., Madison	Evans, Curtis A., Milwaukee
Bennett, W. C., Rhineland	Corcoran, C. J., Milwaukee	Evans, Edward P., S. Milwaukee
Bibby, Elias, Milwaukee	Corr, J. T., Racine	Farrage, J., Breckenridge
Black, N. M., Milwaukee	Cottingham, M. D., Lake Geneva	Farrell, A. M., Two Rivers
Blanton, S. G., Madison	Cowan, W. F., Stevens Point	Ferguson, F. H., Elroy
Blumenthal, R. W., Milwaukee	Crane, Martin C., Osseo	Festerling, E. G., Reedsville
Boland, J. E., Two Rivers	Critchlow, Chas. A., Mellen	Felder, O. A., Sheboygan
Borden, F. R., Plainfield	Crowe, N. F., Waiworth	Fitzgerald, G. M., Milwaukee
Boren, J. W., Marinette	Dana, A. C., Fond du Lac	Fitzgerald, J. J., Eagle
Bornstein, Max, Milwaukee	Darby, G. S., Brodhead	Flanher, L. H., Milwaukee
Bowen, R. L., Oshkosh	Darling, Frank, Milwaukee	Fleming, W. J., Wauwatosa
Boyden, W. L., Seymour	Dawson, Chas. A., River Falls	Foat, John S., Ripon
	Dean, J. P., Madison	Foerster, Harry, Milwaukee

- Ford, Wm. B., Milwaukee
 Fowler, P. H., Plain
 Fox, Philip A., Milwaukee
 Frew, J. W., Milwaukee
 Frawley, W. J., Appleton
 Fritchen, A. F., Franksville
 Fultow, H. A., Eau Claire
 Flynn, L. H., Eau Claire
 Gendron, A. E., River Falls
 Gilchrist, R. T., Milwaukee
 Gillette, H. E., Packwaukee
 Gillis, J. P., Deerbrook
 Gleason, C. M., Oconomowoc
 Gosin, F. J., Green Bay
 Gosin, D. F., Green Bay
 Gradle, H. S., Chicago
 Graebner, H., Milwaukee
 Grannis, I. V., Menomonie
 Gray, R. H., La Crosse
 Greenberg, Harry, Milwaukee
 Gunderson, C. A. S., Madison
 Hafemeister, E. F., North Prairie
 Hager, F. J., Denmark
 Hall, M. W., Mondovi
 Halsey, H. A., Hiles
 Hanley, W. J., Kenosha
 Hanson, E. W., Three Lakes
 Hayes, E. P., Eau Claire
 Hebron, R. A., Cataract
 Heraty, J. E., Bloomington
 Hickey, R. E., Winchester
 Hogau, J. H., Racine
 Hogue, G. L., Milwaukee
 Howell, E. C., Fennimore
 Hansen, J. W., Milwaukee
 Holmes, B. H., Delavan
 Hudek, D. F., Statesan
 Huff, F. C., Sturgeon Bay
 Hughes, C. W., Winneconne
 Hugo, D. G., Oshkosh
 Hunter, C. M., Stetsonville
 Ivy, Robert H., Milwaukee.
 Jenner, A. G., Milwaukee
 Johnson, Elmer S., Oregon
 Johnson, J. C., Ogdensburg
 Johnson, W. W., Racine
 Joseph, W. A., Hancock
 Kampmier, A. J., Milwaukee.
 Kayen, Ralph, Oconomowoc
 Kaysen, Dr., Milwaukee
 Kaysen, Ralph, Watertown
 Keenan, H. A., Stoughton
 Keenan, T. P., Milwaukee
 Kelly, D. M., Baraboo
 Kenney, C. J., Milwaukee
 Kenney, R. L., Milwaukee
 Kerston, E. M., Two Rivers
 King, G. F., Green Bay
 Knox, E. S., Bowler
 Krahn, G. W., Oconto Falls
 Kraus, E. T., Sun Prairie
 Krygier, A. A., Milwaukee
 Kulig, Albert H., Dodge
 Lademann, O. E., Milwaukee
 Lasche, P. G., Richland Center
 Lawhorn, C. C., Milwaukee
 Leahy, J. D., Milwaukee
 Lewis, S. J., Milwaukee
 Leifert, W. C., Milwaukee
 Lillie, O. R., Milwaukee
 Lochemes, W. T., Milwaukee
 Longley, J. R., Fond du Lac
 Lorenz, W. F., Mendota
 Mackedon, T. E., Cedarburg
 MacLaughlin, H. E., Waupaca
 Madison, J. D., Milwaukee
 McBeath, N. E., Livingston
 McCarthy, H. C., Richland Center
 McCarty, A. A., La Crosse
 McCarty, A. J., Green Bay
 McCormick, Wm. C., Tomahawk
 McDill, John R., Milwaukee
 McEachern, W. A., Superior
 McGinnis, J. E., Green Bay
 Menefee, B. F., Montgomery City
 Merrill, W. G., Grand Rapids
 Mertens, H. G., Bayfield
 Meyst, Charles H., Burlington
 Midgley, A. E., Whitewater
 Miller, D. C., Loyal
 Miller, H. C., Whitewater
 Miller, Thomas, Oconomowoc
 Mitchell, E. J., Brodhead
 Mitten, A. A., Milwaukee
 Mix, H. C., Green Bay
 Monstad, J. W., New London
 Moore, L. A., Monroe
 Mueller, W. E., Green Bay
 Mulsow, J. W., Two Rivers
 Myers, I. A., Cottage Grove
 Nelson, G. W., Milwaukee
 Nelson, N. O., Madison
 Nichols, R. M., Sheboygan Falls
 Nims, C. H., Oshkosh
 Notbohm, D. L. R., Dousman
 Ouellette, C. J., Oconto
 Palmer, J. A., Arcadia
 Parker, A. S., Clinton
 Parmenter, E. L., Mondovi
 Patek, A. J., Milwaukee
 Pearson, C. M., Ogema
 Peirce, F. J., Cheyenne
 Perry, Gentz, Amery
 Phillips, L. J., Weyhauser
 Podlasky, H. B., Milwaukee
 Pomainville, F. X., Grand Rapids
 Pope, Frank, Racine
 Pretts, W. W., Platteville
 Provost, A. J., Oshkosh
 Randall, A. J., Kenosha
 Randall, G. R., Milwaukee
 Reay, G. R., La Crosse
 Remer, Win. H., Chaseburg
 Richards, C. A., Rhinelander
 Richards, C. W., Reedsburg
 Robinson, B. N., Prairie du Chien
 Rodecker, R. C., Holcombe
 Rose, F., Coleman
 Rowe, L. B., Brodhead
 Rowley, B. B., White Fish Bay
 Rowley, C. C., Winnebago
 Rueth, J. E., Sun Prairie
 Ruke, E. A., Boscobel
 Rubland, G. C., Milwaukee
 Russell, F. H., Neenah
 Rydell, Chas. B., Superior
 Salbreiter, W. P., Racine
 Sargeant, H. S., Wauwatosa
 Sargeant, H. L., Milwaukee
 Saylor, H., Merrill
 Scantleton, J. M., Sparta
 Schlenker, G. H., Gilman
 Schiek, I. E., Rhinelander
 Schneider, J. F., Oshkosh
 Schoetz, L. N., Racine
 Schnees, J. J., Johnsonburg
 Schoofs, O. P., Wauwatosa
 Schwarz, S. G., Humbird
 Scott, J. R., Appleton
 Seaman, G. E., Milwaukee
 Senn, Geo., De Pere
 Senn, Ulrich, Milwaukee
 Shlmek, A. J., Manitowoc
 Shubert, F., Milwaukee
 Simons, N. S., Taylor
 Sleyster, Rock, Waupun
 Smith, S. M. B., Wausau
 Snodgrass, T. J., Janesville
 Spencer, Geo. F., Evansville
 Squires, C. A., Sheboygan
 Steffen, L. A., Antigo
 Stoland, Iver, Eau Claire
 Smith, T. D., Neenah
 Sykes, L. G., Milwaukee
 Taylor, J. G., Milwaukee
 Thompson, A. S., Mt. Horeb
 Thompson, R. D., Reedsburg
 Towle, Geo. E., Mosinee
 Treglown, L. H., Livingston
 Trobridge, P. T., Washburn
 Trock, M. J., Milwaukee
 Tyvand, J. C., Whitehall
 Van der Ven, J. M., Martell
 Vankirk, F. W., Janesville
 Vogel, Carl C., Elroy
 Watkins, C. W., Oconto
 Wedge, Athol H., Waupun
 Wilklnson, M. R., Oconomowoc
 Willette, Thos., West Allis
 Woodhead, F. J., Merton
 Yates, J. L., Milwaukee

ACCEPTED COMMISSIONS — AWAITING CALL.

- Bachlinski, L. J., Milwaukee
 Baird, J. C., Eau Claire
 Beebe, C. M., Sparta
 Beffel, J. M., Milwaukee
 Bendixen, B. O., Campbellsport
 Bentley, J. E., Portage
 Berger, A. J., New Holstein
 Bolton, E. L., Chilton
 Brazeau, G. N., Racine
 Brown, C. W., Milwaukee
 Brown, G. V. I., Milwaukee
 Brown, H. M., Milwaukee
 Buckley, Wm. E., Hartford
 Buell, H. A., Prairie Farm
 Butler, P. E., Menomonie
 Cain, C. L., Elmwood
 Campbell, L. A., Clear Lake
 Chorlog, J. K., Madison
 de Neven, A. V., Wyoceua
 Dodd, John M., Ashland
 Dierschke, P. C., N. Freedom
 Donohue, W. E., Manitowoc
 Eifers, J. C., Sheboygan
 Evans, Edward, La Crosse
 Farrage, J., Breckinridge
 Fletcher, E. A., Milwaukee
 Foster, A. M., Racine
 Fowler, J. H., Lancaster
 France, J. J., Milwaukee
 Gavin, S. E., Fond du Lac
 Gates, Eugene, Two Rivers
 Gillespie, W. W., Milwaukee
 Hansen, Wm. C., Racine
 Harper, C. A., Madison
 Harvie, D. D., Oshkosh
 Harrison, Geo., Ashland
 Hatch, W. E., Superior
 Hendrickson, H., Green Bay
 Hertzman, C. O., Ashland
 Hinrichs, R. G., Ashland
 Iftiz, H. B., Milwaukee
 Hoffman, J. G., Hartford
 Jefferson, H. A., Clintonville
 Jones, M. L., Wausau
 Kay, H. M., Chicago
 Kelly, Chas. D., Blair
 Kennedy, F. H., Greenwood
 Krause, E. T., Sun Prairie
 Laughlin, T., Winneconne
 Lundmark, L. M., Ladysmith
 Lynch, D. W., West Bend
 McGrath, E. P., Appleton
 McMahon, F. B., Milwaukee
 Mehl, Hugo F., Milwaukee
 Middleton, W. S., Madison
 Moore, W. N., Appleton
 Murphy, E. R. P., Antigo
 Murphy, Wm. T., Waukesha
 Nelson, O. A., Park Falls
 Newman, Robert, Chicago.
 Nott, Geo. W., Racine
 Nuzum, Thos. W., Janesville
 Oates, Frank, Fond du Lac
 O'Brien, H. N., Darien
 Olson, R. F., Milwaukee
 Patchen, Geo. W., Manitowoc
 Pember, J. F., Janesville
 Peterson, G. E., Waukesha
 Pullen, A. J., N. Fond du Lac
 Puls, A. J., Milwaukee
 Quinn, Jos. F., Milwaukee
 Rantz, W. L., Rosholt
 Rice, F. R., Walmouth
 Riley, E. A., Park Falls
 Roberts, D. W., Milwaukee
 Rogers, E. H., Stevens Point
 Rogers, Phllp, Milwaukee
 Rogers, F. C., Oconomowoc
 Scanlan, P. L., Prairie du Chien
 Scheer, G. H., Sheboygan
 Schlesselman, G. H., Fond du Lac
 Schmitt, F. J., West Allis
 Schwartz, A. B., Milwaukee
 Shockley, H. O., Darlington
 Smith, A. D., Gilmanton
 Smith, Eugene, Milwaukee
 Smith, J. W., Milwaukee
 Steenberg, H. S., Milwaukee
 Stoddard, C. H., Milwaukee
 Stuesser, C. N., Oconomowoc
 Sylvester, Homer, Montfort
 Taylor, W. A., Portage
 Thompson, F. A., Milwaukee
 Thompson, J. B., Wittenberg
 Torney, T. G., Monocqua
 Tuffey, F. S., Boscobel
 Voorus, L. O., Beaver Dam
 Walters, F. A., Stevens Point
 Welngart, W. F., Milwaukee
 Wilsender, A. J., Berlin
 Wilkowski, C. W., Chippewa Falls
 Wilson, R. S., Milwaukee
 Witte, Dexter H., Wauwatosa

THE STATE MEDICAL SOCIETY OF WISCONSIN

ORGANIZED 1841

Officers 1916-17

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G. WINDESHEIM, Kenosha, President-Elect
ROCK SLEYSER, Waupun, Secretary

J. L. SMITH, Wausau
1st Vice President
J. F. PEMBER, Janesville, 3rd Vice President
DANIEL HOPKINSON, Milwaukee, Ass't Secretary

I. G. BABCOCK, Cumberland
2nd Vice President
S. S. HALL, Ripon, Treasurer

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2nd Dist., G. Windesheim - Kenosha

TERM EXPIRES 1918
3rd Dist., F. T. Nye - Beloit
4th Dist., W. Cunningham - Platteville

TERM EXPIRES 1919
5th Dist., W. F. Zierath - Sheboygan
6th Dist., H. W. Abraham - Appleton

TERM EXPIRES 1920
7th Dist., Edward Evans - LaCrosse
8th Dist., T. J. Redelings - Marinette

TERM EXPIRES 1921
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Alternates

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T. W. NUZUM, Janesville

WILSON CUNNINGHAM, Platteville

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EDWARD QUICK, Milwaukee, Chairman

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MEDICAL SECTION

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J. S. EVANS, Madison, Secretary

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EYE, EAR, NOSE, THROAT SECTION

S. S. HALL, Ripon, Chairman
JOS. BELLIN, Green Bay, Secretary

The Wisconsin Medical Journal, Official Publication

LIST OF EXECUTIVE OFFICERS OF COUNTY MEDICAL SOCIETIES.

County.	President.	Secretary.
Ashland-Bayfield-Iron	C. J. Smiles, Ashland.	O. Braun, Ashland.
Barron-Polk-Washburn-Sawyer-Burnett	H. M. Coleman, Barron.	I. G. Babcock, Cumberland.
Brown-Kewaunee	I. E. Levitas, Green Bay.	E. G. Nadeau, Green Bay.
Calumet	Wm. Schmitz, School Hill.	E. L. Bolton, Chilton.
Chippewa	C. W. Wilkowski, Chippewa Falls.	F. T. McHugh, Chippewa Falls.
Clark	H. H. Christofferson, Colby.	E. L. Bradbury, Neillsville.
Columbia	O. O. Force, Pardeeville.	A. F. Schmeling, Columbus.
Crawford	C. B. Lumsford, Gays Mills.	A. J. McDowell, Soldiers Grove.
Dane	Frank Drake, Mendota.	L. H. Prince, Madison.
Dodge	R. E. Bachhuber, Mayville.	E. S. Elliott, Fox Lake.
Door	H. C. Sibre.	T. C. Proctor, Sturgeon Bay.
Douglas	D. R. Searle, Superior.	L. A. Potter, Superior.
Dunn-Pepin	A. F. Heising, Menomonie.	G. C. Nedry, Menomnie.
Eau Claire	H. F. Derge, Eau Claire.	L. H. Flynn, Eau Claire.
Fond du Lac	G. B. McKnight, Fond du Lac.	F. M. McGauley, Fond du Lac.
Grant	J. C. Doolittle, Lancaster.	M. B. Glasier, Bloomington.
Green	W. B. Gnagi, Monroe.	L. A. Moore, Monroe.
Green Lake-Washara-Adams	G. E. Baldwin, Green Lake.	J. A. Wiesender, Berlin.
Iowa	G. H. McCallister, Avoca.	J. R. Hughes, Dodgeville.
Jefferson	A. A. Busse, Jefferson.	W. A. Engsborg, Lake Mills.
Juneau	Brand Starnes, Mauston.	A. T. Gregory, Elroy.
Kenosha	C. R. Caughey, Kenosha.	J. F. Hastings, Kenosha.
La Crosse	G. W. Luck, La Crosse.	J. M. Furstmann, La Crosse.
Lafayette	J. C. Hubenthal, Belmont.	H. O. Shockley, Darlington.
Langlade	M. J. Donohue, Antigo.	J. C. Wright, Antigo.
Lincoln	H. G. Hinkle, Merrill.	D. B. Reinhart, Merrill.
Manitowoc	J. F. Pritchard, Manitowoc.	Louis Falge, Manitowoc.
Marathon	W. A. Green, Wausau.	F. H. Frey, Wausau.
Marinette-Florence	H. F. Schroeder, Marinette.	Luella E. Axtell, Marinette.
Milwaukee	P. F. Rogers, Milwaukee.	Daniel Hopkinson, Milwaukee.
Monroe	A. R. Bell, Tomah.	Spencer D. Beebe, Sparta.
Oconto	C. W. Stoelting, Oconto.	T. C. Clarke, Oconto.
Oneida-Forest-Vilas	W. C. Bennet, Rhinelander.	C. A. Richards, Rhinelander.
Outagamie	G. A. Ritchie, Appleton.	M. E. Rideout, Appleton.
Ozaukee	Geo. F. Savage, Port Washington.	Henry M. Katz, Cedarburg.
Pierce	W. A. Lumley, Ellsworth.	R. U. Cairns, River Falls.
Portage	W. W. Gregory, Stevens Point.	J. D. Lindores, Stevens Point.
Price-Taylor	W. E. Ellis, Dunbar.	G. C. Wichman, Rib Lake.
Racine	J. H. Hogan, Racine.	Susan Jones, Racine.
Richland	C. F. Dougherty, Richland Center.	Gideon Benson, Richland Center.
Rock	T. W. Nuzum, Janesville.	E. B. Brown, Beloit.
Rusk	Julian C. Baker, Hawkins.	L. M. Lundmark, Ladysmith.
Sauk	F. D. Hulbert, Reedsburg.	Roger Cahoon, Baraboo.
Shawano	J. B. Gordon, Shawano.	W. H. Cantwell, Shawano.
Sheboygan	Otho Fiedler, Sheboygan.	C. N. Sonnenburg, Sheboygan.
St. Croix	B. Kunny, Baldwin.	O. H. Epley, New Richmond.
Trempealeau-Jackson-Buffalo	G. F. Stack, Independence.	C. F. Peterson, Independence.
Vernon	J. K. Schreiner, Westby.	F. E. Morley, Viroqua.
Walworth	M. D. Cottingham, Lake Geneva.	Edward Kinne, Elkhorn.
Washington	H. F. Weber, Newburg.	A. H. Heldner, West Bend.
Waukesha	H. A. Peters, Waukesha.	S. B. Ackley, Oconomowoc.
Waupaca	W. Irving, Manawa.	G. T. Dawley, New London.
Winnebago	J. W. Lockhart, Oshkosh.	E. H. Hunt, Oshkosh.
Wood	Ed. Hougen, Grand Rapids.	W. M. Ruckle, Grand Rapids.

SOCIETY PROCEEDINGS

INTERURBAN ACADEMY OF MEDICINE.

At the annual meeting of the Interurban Academy of Medicine, held at the Commercial Club, Superior, Dr. L. W. Beebe of Superior was elected president, Dr. Nicholson of Duluth was elected vice-president, Dr. George Saunders, Superior, secretary-treasurer.

Dr. Farr of Minneapolis gave a talk on "Local Anaesthesia", illustrated with slides. A supper preceded the meeting.

ROCK COUNTY

The November meeting of Rock County Medical Society was held at Beloit, at the lecture room of the Y. M. C. A. on November 26th. Dr. E. H. Ochsner, of Chicago, delivered an address on "A Specific for Every Pathogenic Micro-Organism".

WEST WISCONSIN DISTRICT MEDICAL SOCIETY

The West Wisconsin District Medical Society met at Eau Claire on November 9th and elected the following officers: President, Dr. F. S. Cook, Eau Claire; vice-president, Dr. N. Warner, Baraboo; secretary, Dr. E. E. Tupper, Eau Claire. About fifty members were present. Dr. A. C. Kissling, Milwaukee, read a paper on "Reflex Cough"; Dr. W. E. Bannen, La Crosse on "Spasmodiphilia"; "Dieduoma Malignum," Dr. Arthur G. Sullivan, Madison; "Treatment of Strangulated Hernia," Dr. Warren A. Dennis, St. Paul; "Disorders of the Feet," Dr. F. J. Gaenslen, Milwaukee.

**Don't forget the 3rd, 1918, Liberty Loan.
Save your money. We must win this war.**

NEWS ITEMS AND PERSONALS

LT. COL. GILBERT E. SEAMAN, M. C., has been made Chief Surgeon, 32nd Division, Camp McArthur, Texas. This Division comprises all the troops of Wisconsin and Michigan.

CAPT. GENTZ PERRY, M. R. C., has been ordered to active military duty at the School of Military Roentgenology, Pittsburgh, Pa.

DR. GEORGE P. DEMPSEY, Monches, has been commissioned a captain in the Medical Reserve Corps.

DR. JOHN R. MINAHAN, Green Bay, has received a captain's commission in the Medical Reserve Corps of the Army.

LIEUT. J. E. HERATY, of Bloomington, who for the past three months has been stationed at Fort Benjamin Harrison, Indiana, has been transferred to Camp Pike, Little Rock, Arkansas.

CAPT. FRANK VAN KIRK of Janesville, who is stationed at Camp Travis, Texas, has been commissioned a major.

DR. W. T. LOCHEMES, Milwaukee, has been commissioned a 1st Lieutenant, Medical Reserve Corps, and is stationed at Camp Grant, Rockford, Ill.

LIEUT. E. O. FITZ, of the Medical Officers' Reserve Corps, has been assigned to duty under Major Mayo, at the Mayo Clinic, Rochester, Minn., and from there to proceed to the Base Hospital, 88th Division.

1ST LIEUT. ROCK SLEYSER, Waupun, has been ordered to report for temporary duty at Washington. Lieut. Sleyser is called by Gen. Ladd for a conference of physicians, one from each state.

DR. N. F. CROWE, Walworth, is now in England, where he has charge of two war hospitals.

DR. E. A. TAYLOR, Racine, has been appointed medical examiner for the Exemption Board, in Division No. 2, in place of Dr. William C. Hanson, who has entered the military service.

DR. FRED A. NAUSE, stationed for the past three months at the Naval Medical School and Hospital at Washington, has been ordered to Quantico, Va.

DR. WILLIAM F. WHYTE, for more than twenty years president of the State Board of Health, has been commissioned a 1st Lieutenant Medical Officers' Reserve Corps, and is stationed at Ft. Benjamin Harrison, Ind.

DR. W. B. HOPKINS, Cumberland, is seriously ill with pleurisy.

DR. A. E. MACMILLAN, Stevens Point, underwent an operation for gallstones recently, and is convalescing.

DR. T. D. SMITH, Neenah, who was recently wounded in a German air raid, in a base hospital behind the trench line, is under treatment in a hospital in England.

DR. F. M. HARRIS, who recently resigned as director of the State Co-operative Laboratory at St. Agnes, Hospital, Fond du Lac, is now established in private practice at Fond du Lac.

DR. A. H. HEIDNER, West Bend, and K. T. Bauer, Beechwood, have formed a partnership at West Bend.

DR. STANLEY VAN HECKE has become associated with Dr. L. N. Pearson, in the practice of medicine, at Tomahawk.

DR. H. P. GREELEY, who for several years has been at the Waukesha Spa with Dr. Hodgson, is now at the Rockefeller Institute, where he will remain for six months.

DR. M. N. FEDERSPIEL, Milwaukee, was elected president and Dr. Henry McCable, Milwaukee, vice-president of the Marquette University Alumni Association.

DR. FRANK L. CRICELAIR, Green Bay, was recently appointed county physician for Brown County.

A suit for damages amounting to \$10,000 has been filed in Circuit Court by Stanislaus Kasprzak against Dr. Joseph J. Eisenberg. In the complaint the plaintiff says that the death of his wife was the result of an overdose of chloroform.

DR. H. J. SUTTLE, Viroqua, will spend the winter in California.

DR. J. P. MORNEAU, Appleton, has received a patent for a sanitary thermometer. Dr. Morneau submitted the patent more than three years ago. The invention provides constant sterilization of the thermometer when in the case.

DR. W. C. F. WITTE and Dr. Peter H. Jobse will resume their association of the practice of Surgery, after January 1, 1918.

DR. GEORGE M. BELHUMER of Negaunee, Michigan, has been appointed chief surgeon for the

Kimberly-Clark Lumber Company at Niagara, Wis. He will have charge of the new hospital now being built at Niagara for the care of employees of the company.

RESTHAVEN HOTEL, Waukesha, has been purchased by a New York attorney who will convert the institution into a sanitarium. The consideration was \$75,000.

By a joint agreement Bayfield, Ashland and Iron Counties will erect a tuberculosis sanatorium to cost \$100,000.

RICE LAKE, by popular subscription, has raised a \$75,000 fund for the erection of a hospital, upon a site owned by the Sisters of St. Joseph's Hospital, who will conduct the new hospital.

DRS. PERRY and CROMMETT of Amery, Wisconsin, have just completed their new thirty bed hospital at a cost of \$20,000. The equipment is modern throughout. Drs. Crommett, Sandin, A. N. Nelson and C. A. Nelson will conduct the hospital while Dr. Perry is away in the military service.

Ashland General Hospital Association, in a recent campaign obtained \$40,000 to add to its present building fund. This gives the hospital with its equipment and grounds an \$80,000 property. The hospital will accommodate 60 patients, although the plans provide for extensions and additions as needed. The ground site is 300x466 feet, in size approximately a block and a half.

The recent campaign for a building and endowment fund for Columbia Hospital and Training School for Nurses, Milwaukee, netted that institution \$550,000. A splendid site was secured through the generosity of Mr. Fred Vogel, Jr., who donated a five-acre tract. The buildings are now in course of erection, and it is expected that the first unit will be ready for service in April. The first wing of the hospital will be about forty feet wide, and one hundred and fifty feet long. It will be five stories high, allowing three floors for patients' rooms, the ground floor for kitchens, nurses' class rooms, administrative rooms, etc., and the upper floor for surgical and similar purposes. There will be provided four operating rooms, with a central sterilizing plant, an orthopedic room, an

X-ray department, two laboratories, a drug room, a cardiograph room, nurses' work rooms, and seventy beds which will accommodate about 1,800 to 2,000 patients a year.

The Medical Examinership for the Wisconsin State Tuberculosis Sanatorium has been extended to include all regularly licensed physicians who are citizens of Wisconsin. The former list will be used in cases where the applicant to the sanatorium does not give the name of his family physician.

The Bennett Medical College and the Chicago College of Medicine and Surgery are now combined to form the medical department of Loyola University of Chicago. The purchase of the buildings and equipment of the Chicago College was made recently by Loyola University officials.

Dr. Lawrence Ryan is dean of the new faculty of the school; Dr. Alfred de Roulet is junior dean; Dr. G. E. Wyneken is secretary; Rev. H. S. Spalding, S. J., is regent. The institution comprises five buildings.

Through the generous offer of the Cancer Commission of Harvard University, a free diagnosis service was established in Massachusetts on October 1, 1917. This service offers to the registered physicians of the state opportunity for the free diagnosis of pathological material removed at operation. Restrictions upon the employment of the exploratory incision in cancer tissue have been announced in connection with this service. It is largely in response to the recommendation of the American Society for the Control of Cancer, and the Committee on Cancer of the Massachusetts Medical Society, that this work has been undertaken.

The European War has dealt New York City an unexpected blow—it has cut off the supply of white mice. Two factors have operated to produce this shortage. One of these is the increased cost of breeding these animals—the other is the European war. It is reported that the Federal government has taken up a large part of the available supply, utilizing the animals in tests to determine the presence of impurities in the air of submarines. Breeders having white mice for sale will find a ready market at the New York City Health Department.

In spite of previous announcements that the American Red Cross does not approve the chain-letter system of raising money, and that it has never authorized any chain-letter promoters to use the name of the Red Cross in any way, letters of this nature are in circulation, and many copies of them have been forwarded to National Headquarters for explanation.

The American Red Cross reiterates that no chain-letter project has its approval. While some of these schemes may have been started in good faith mention of the Red Cross is not warranted. Red Cross members, and the public in general, are warned that there is no assurance that donations in response to any chain-letter will reach the Red Cross treasury, and are urged to pay no attention to such appeals, whose sincerity is always open to doubt.

Aids to the American Red Cross should always be furnished through recognized channels, if the donor wishes to be assured that his gift is to reach the object intended.

Gov. Philipp received confirmation from President Wilson of the nominations to the twenty-two Wisconsin medical advisory boards of the state. Each of the boards is made up of from five to seven experts in various branches of medicine and usually comprises a surgeon, a neurologist, an internist; a laboratory man, an X-ray expert and a genito-urinary specialist.

The Milwaukee Boards follow:

District No. 1—Jurisdiction, city divisions, 4, 10 and 13; county division, 1; medical center, Marquette University, School of Medicine: Chairman, Harry A. Sifton, Wells building; Louis M. Warfield, 79 Wisconsin St.; Samuel G. Higgins, Wells building; Errol V. Brumbaugh, city hall; Richard Dewey, Wauwatosha; Harry Cohn, Wauwatosha; Emerson A. Fletcher, 128 Wisconsin St.; Fred J. Gaenslen, 141 Wisconsin St.

District No. 2—Jurisdiction, city divisions, 1, 2, 3, 6, 7, 9 and 15; medical center, Marquette University, School of Medicine: Chairman, Alfred W. Gray, Wells building; Horace M. Brown, 79 Wisconsin St.; William E. Grove, Wells building; Daniel F. Hopkinson, 1008 Third St.; Henry V. Ogden, Goldsmith Building; Edward Quick, Wells building; Otto Foerster, 128 Wisconsin St.

District No. 3—Jurisdiction, city divisions, 5, 8, 11, 12 and 14; county division, 2; medical cen-

ter, Marquette University, School of Medicine; Chairman, Louis F. Jermain, Majestic building; Wilbur L. LeCron, 141 Wisconsin St.; Claude S. Beebe, 173 Wisconsin St.; Edward F. Barta, 1720 Walnut St.; Frank C. Studley, 898 Summit Ave.; E. W. Bentzein, 420 East North Ave.; Oscar Lotz, Majestic building.

MARRIAGES

Dr. John T. Sullivan, Milwaukee, and Miss Lona Chapman, North Fond du Lac, on October 27th.

REMOVALS

Dr. H. C. Waddle, Hazel Green to Broadhead.

Dr. Marshall Surensen, Prairie du Chien to Viroqua.

Dr. William E. Ellis, Prentice to Dunbar.

Dr. J. R. Mitchell, who was formerly located at Washburn, but more recently at Chicago, has returned to Washburn for the practice of his profession.

DEATHS

Dr. George N. Carnahan, Bruce, Wis., a graduate of Louisville, Ky., Medical College in 1878, died at Sacred Heart Hospital, Eau Claire, on Oct. 25, after a surgical operation, aged 60 years.

Dr. Alfred W. Goebel, Milwaukee, died on November 12th, 1917, aged 39 years. Dr. Goebel was a graduate of Northwestern University Medical School, class of 1905. He was for some years an instructor at Marquette University Medical School.

Dr. James Mills, Janesville, suicided on November 19th by leaping into the Rock River. Dr. Mills had been in ill health for two years.

James Mills was born on July 25, 1852, in Johnstown. His early boyhood was spent on a farm. He attended Milton College and graduated in 1879 with the degree of Master of Science. On leaving this institution he entered the office of Dr. Henry Palmer at Janesville to study medicine. In 1880 he entered Northwestern University Medical College, and graduated in 1883. He also studied at Edinburgh University, London and Paris. In 1885 he located at Janesville, and had lived there ever since.

Dr. Mills was a member of Rock County and the State Medical Societies.

Dr. James Ward Vance, Madison, died on November 1, aged 85 years. Pneumonia was the cause of death. Dr. Vance was born at Wilmington, Ohio. He received his education in the Cincinnati public schools; his medical education was obtained at the University of Cincinnati, College of Medicine. He practiced for many years at Lawrenceburg, Indiana, and at College Hill, Ohio. In 1881 he located at Madison.

**Don't forget the 3rd, 1918, Liberty Loan.
Save your money. We must win this war.**

REPORT OF TRI-STATE DISTRICT MEDICAL MEETING.

The second annual scientific and clinical meeting of the Tri-State District Medical Society was held at the Hotel Julian, Dubuque, Iowa, September 4th, 5th, and 6th, 1917. The meeting was a large and notable one in every respect. It was largely through the efficiency and energy of the following Dubuque physicians that the meeting was a great success: Drs. H. G. Langworthy, H. B. Gratiot, C. A. McGuire, J. C. Hancock, J. R. Guthrie, I. S. Bigelow, J. J. Rowan, B. Michel, A. M. Pond, A. M. Loes, C. A. Kearney, H. M. Phalas and J. R. Schrup. The ladies Entertainment Committee membered by Mesdames H. B. Gratiot as Chairman, J. R. Guthrie, W. P. Slattery, I. S. Bigelow, George Minges and C. A. Kearney also deserve a great deal of credit for the enjoyable time that was had by all present.

Through the energy of Dr. D. G. Smith of Freeport, Illinois, the Directors of Concessions, a number of surgical instrument houses and book concerns were represented by fine displays.

The Program Committee consisting of Drs. Lawrence H. Prince of Madison, Wisconsin, William H. Perry of Sterling, Illinois, and C. A. McGuire of Dubuque, Iowa, had worked hard in preparing a program of which we think we can justly say that few medical meetings have ever excelled. The program as published previous to the meeting in this Journal was carried out in detail with a few exceptions. The scientific and social sessions of the meeting were held in the Gold Room of the Hotel Julian. The address of welcome on behalf of Dubuque was given by County Attorney Hugh Stuart, who as spokesman for the city paid a high tribute to the members of the medical profession and stated that it was the wish of every Dubuquer that the attending physicians should enjoy the hospitalities of this city to the fullest extent. We have not room here to recite in detail the splendid compliments that Attorney Stuart paid our profession, but we would like to take this opportunity also to compliment Dubuque upon having such an efficient County Attorney. The response to the ad-

dress of welcome was delivered by Dr. Emil Windmuller of Woodstock, Illinois. Dr. Windmuller is Councilor of the Illinois State Medical Society and one of the livest wires in the medical profession of his state. In his address he expressed his gratitude for the manner in which the doctors had been received, the interest manifested by the Dubuque people in the convention, and their co-operation in making it a success. He paid a compliment to the Dubuque physicians for the splendid way in which they had arranged for the doctors' entertainment, also as to their high standing in the medical profession. In closing he stated that this meeting would go down in medical history as one of the finest medical meetings ever held in the middle West.

The evening meeting of September 4th was taken up by an address in surgery by Dr. C. W. Hopkins, Chief Surgeon of the Northwestern Railroad. Dr. Hopkins took as his subject, "Unusual and Interesting Fractures and Dislocations. Method of Treatment and Results." Every physician who listened to Dr. Hopkins' address was well paid for his trip to Dubuque. We only wish that we had time here to give some of the extracts from this address. However, we hope that you may have the pleasure of reading Dr. Hopkins' address in this Journal in the near future. Informal discussion of Dr. Hopkins' paper was led by Dr. P. A. Bendixen of Davenport, Iowa, and Dr. A. M. Pond of Dubuque, Iowa. Following Dr. Hopkins' address vitagraphs of operation and technique of same, illustrating bone surgery by Dr. Fred H. Albee of New York, were shown. The opportunity of seeing these pictures of Dr. Albee's work was a rare treat for the physicians present and our society feel deeply grateful to Dr. J. H. Schrup of Dubuque for this privilege.

The morning of the second day of the meeting was partly devoted to clinics at Finley and Mercy Hospitals. The clinics were in charge of the Dubuque Clinic Committee, Dr. J. R. Guthrie as Chairman. They were devoted entirely to clinical diagnosis and many interesting cases were brought before the physicians. Dr. Edward Ochsner presented a very interesting clinic at Mercy Hospital, the material for same being furnished by local physicians.

At 11:00, an address in surgery was delivered by Dr. Edward Ochsner of Chicago, the title of address being, "A Specific for Every Pathological Micro-organization, the Ultimate Goal of Surgery." Dr. Ochsner's address was a rare treat to the large audience of physicians who were present. The address was followed by a very interesting discussion, which was participated in by Drs. Schrup of Dubuque, Iowa, Leitzell of Benton, Wisconsin, White of Clinton, Iowa, and others. We hope that the profession will have an opportunity in a short time of reading Dr. Ochsner's paper (in detail) in this Journal.

At 2 o'clock, Dr. William A. Pusey, Prof. of Dermatology, University of Illinois, delivered an address in medicine, taking as his subject, "A Critical Consideration of Some of the Present Problems in Syphilis." Dr. Pusey is at the present time in Washington, D. C., assisting the Government in preventing and controlling this affection in the United States Army. This address also

excited a very interesting discussion which was led by Drs. C. L. Best of Freeport, Illinois, Crawford of Cedar Rapids, Iowa, Cottral of Savanna, Illinois, Bryan of Belle Plaine, Iowa, Shannon of Waterloo, Iowa, and others.

Dr. W. A. Pusey, C. W. Hopkins and Dr. Edward Ochsner were then extended a vote of thanks by this society for their distinguished addresses and were made honorary members of the organization.

A business session was convened at 4 o'clock and a report of the nomination committee, consisting of Drs. A. M. Pond, Dubuque, Iowa, D. G. Smith, Freeport, Illinois, and Wm. T. Lindsey, Madison, Wisconsin, was heard. The nominating committee presented the following gentlemen to fill the offices of the society for the coming year:

Honorary President—Dr. James R. Guthrie, Dubuque, Iowa.

President—Dr. W. B. Peck, Freeport, Illinois.

First Vice-President—Dr. C. A. McGuire, Dubuque, Iowa.

Second Vice-President—Dr. E. S. Gillispie, Winona, Illinois.

Third Vice-President—Dr. Lawrence H. Prince, Madison, Wis.

Secretary and Treasurer—Dr. Nelson C. Phillips, Freeport, Ill.

The committee on place of meeting for the next annual gathering presented a communication from the Madison Board of Commerce inviting the society to hold its 1918 convention in that city. The invitation was accepted and it was voted to hold the next annual meeting in the capital of Wisconsin.

At 8:00, the doctors and their ladies were entertained by the Dubuque County Medical Society through their Entertainment Committee headed by Dr. I. S. Bigelow with a boat ride on the Mississippi. The finest of music and entertainment was offered on this trip. It would be foolish of us to attempt to describe the delightful time that was had by all present. Beautiful music filled the air and everywhere on the boat the doctors and their ladies enjoyed the good things that makes the word Dubuque synonymous with generosity and hospitality.

The third day of the meeting was opened with a clinic at the hospitals. Dr. John B. Deaver, Philadelphia, Prof. of Surgeons of the University of Pennsylvania, conducted a diagnostic clinic at the Finley Hospital. Dr. Guthrie and his committee had an abundance of material present and Dr. Deaver for over an hour and a half presented case after case to a large gathering of physicians; a ward in the hospital being supplied for this purpose. This was one of the best features of the meeting and the Tri-State feels deeply indebted to Dr. Deaver and the Dubuque committee for making it possible. Dr. Deaver also gave an address in surgery at 11:00 A. M. entitled, "The Applied Physiology of the Prostate Gland." Dr. Deaver's address was a strong argument for the suprapubic operation. His paper will be given to this Journal for publication in the near future. The opportunity was given the physicians present of asking Dr. Deaver any questions pertaining to his address.

This invitation was responded to by Drs. Schrup of Dubuque, Iowa, White of Freeport, Illinois, Nuzum of Janesville, Wisconsin, and Connell of Beloit, Wisconsin. Dr. Deaver then closed his address and was accorded a hearty demonstration by the large audience of physicians present.

The final paper of the scientific program was an address in surgery by Dr. Charles H. Mayo, President of the A. M. A., who chose as his subject, "Exstrophy of the Bladder and Its Treatment." The address of Dr. Mayo was closely listened to by a large gathering of physicians from all parts of the three states. The doctor's address was a fitting close of a medical and surgical program which had held the attention of a large and enthusiastic assembly of physicians during the three days' session.

The evening session of September 6th. was taken up with an annual banquet of the Medical Association held in the Gold Room of the Hotel Julian. Plates were laid for four hundred guests. Dr. Thomas E. Throckmorton, the efficient Secretary of the Iowa State Medical Society, officiated as Toastmaster. Dr. Throckmorton's ability in successfully handling medical meetings and banquets is well known, but we believe that on this occasion he out-generated his former efforts. From the time he assumed the Toastmastership until he closed the banquet every one was in a happy frame of mind.

Dr. Deaver was the first speaker who responded to a toast. Dr. Deaver spoke in a patriotic tone of the present Government crisis, and the duty of the physician to his country. Dr. Deaver's remarks were received with long applause which did not cease until the doctor made a number of bows. Dr. Charles Mayo was the next speaker. He spoke of the recent advances in medicine and surgery with special application to the war conditions. He also, like Dr. Deaver, called attention of the physicians to their duty to their country at this time. By the time Dr. Mayo had finished his address, the audience was in a very enthusiastic frame of mind and Dr. Mayo was compelled a number of times to rise to his feet in acknowledgment of the spirit. Major E. B. Cooley, Danville, Illinois, President Illinois State Medical Society, entertained the doctors with a very able and patriotic address. He referred in a complimentary manner to the distinguished physicians who had spoken before him, also of the honored guests who were to follow him, Governors Harding of Iowa and Lowden of Illinois. Major Cooley has a very clear vision of the future and staked his reputation in a prophecy (which we all feel willing to back him) that Governor Lowden was only a temporary resident of Illinois and that the time was near at hand when our nation would claim him as its Chief Executive. Major Cooley's remarks were received with hearty applause. Hon. William L. Harding, Governor of Iowa, spoke in terms of praise of the medical profession and the opportunity it had in helping to defend the country in the present crisis. The Governor said, "I deem the opportunity of addressing the Tri-State Medical Society one of the rarest privileges that has been accorded me during my experience in public life. It is an inspiring occa-

sion and I only hope that my efforts are worthy of the importance of the event." Governor Harding also spoke in glowing terms of Governor Lowden of Illinois. He said that Governor Lowden was raised in Iowa and that they had only loaned him to Illinois; that some day in the near future they were going to reclaim him as he believed that Governor Lowden was on the way to the White House. The applause that greeted Governor Harding's remarks lasted for many minutes and only ceased when the Governor had responded with a number of salutations. The last speaker at the banquet was Governor Lowden of Illinois. The deep appreciation of the Governor's presence caused a demonstration on both the part of the doctors and the ladies that compelled the speaker to wait for a considerable time before starting his address. The Governor spoke in an earnest and convincing manner in regard to our duties as American citizens in the present crisis. He paid tribute to the distinguished medical guests present and spoke in praise of the medical organization. He said that he considered the opportunity of addressing this society a great privilege and that the pleasure of doing so would long be remembered by him. Governor Lowden's remarks were frequently interrupted by applause especially when he referred to state and government affairs. There was an energetic exhibition of feeling on the part of the entire audience at the close of the Governor's address which continued until the Toastmaster had to come to the Governor's rescue and insist that it was time for the guests to catch their trains.

Drs. Deaver and Mayo, and Governors Lowden and Harding were made honorary members of the association.

A vote of thanks was extended to the Dubuque physicians for the splendid hospitality extended the visiting physicians.

The Committee on Resolutions then presented their report as follows:

Mr. President and Members of the Tri-State District Medical Society:

Your Committee on Resolutions herewith tenders its report, viz.:

Be It Resolved, That we, the members of the Tri-State District Medical Society, in convention assembled, do hereby express our sincere appreciation and thanks for the splendid hospitality extended to us by the people of Dubuque.

We are especially indebted to the members of the Dubuque County Medical Society and the ladies of Dubuque associated with them for their interesting efforts and generous entertainment.

And Be It Further Resolved, That we wish to sincerely thank the guests of this society for their able papers and their interesting clinics.

Be It Further Resolved, That the following guests,

Dr. C. W. Hopkins, of Chicago,

Dr. Edward Ochsner, of Chicago,

Dr. William A. Pusey, of Chicago,

Dr. John B. Deaver, of Philadelphia,

Dr. Charles H. Mayo, of Rochester, Minnesota,
be made honorary members of this society.

Be It Further Resolved, That we extend our thanks to their Excellencies, Governors Frank O. Lowden, of Illinois, and William L. Harding, of Iowa, for their presence and participation in our meeting.

Further Resolved, That the members of this society, in convention assembled, pledge their unswerving loyalty and service to the Government of the United States in the great conflict in which it is engaged, and that they express their unanimous and whole-hearted commendation of the patriotic utterances and acts of the Governors of Iowa, Illinois, and Wisconsin, the great commonwealth of the Middle West, whose sons have proudly borne their banners to the forefront on every occasion of national stress and peril.

Signed,

WILSON A. CUNNINGHAM, Platteville, Wis.,
Chairman.

T. W. NUZUM, Janesville, Wis.,

A. ALGUIRE, Belvidere, Ill.,

J. C. HANCOCK, Dubuque, Ia.,

C. L. BEST, Freeport, Ill.,

EDWIN S. GILLESPIE, Winona, Ill.,

Committee on Resolutions.

Kenosha, Wis., Dec. 14, 1919.

To the Members of the Medical Profession of Wisconsin.

GREETINGS:

With the coming year the duties of the presidency of the State Medical Society of Wisconsin have been placed in my charge.

I certainly appreciate very highly the great honor bestowed upon me by your House of Delegates, but I also realize that this honor carries with it many responsibilities.

My predecessors have endeavored, with much success, to place the Medical Profession of Wisconsin upon a high pedestal, and it shall be not the least of my efforts to maintain the standard set by them and even improve on it if this were possible.

However, the success in doing this will depend entirely upon the attitude of the individual members of the Medical Profession in the State.

For the sake of our loved profession then I beseech each and every one of you to favor me with your advice, your support and your hearty co-operation; make your County Medical Society and, through it, the State Medical Society, a means of benefit to yourself and the Profession at large; that the year 1918 shall be known as at least equal, if not superior, to any in the history of the State Medical Society of Wisconsin.

If at any time in your opinion I can be of service to you in any way, please feel free to command me.

Hopeful that our relations shall prove pleasant and mutually beneficial, I extend to you, one and all, the glad hand of fellowship and brotherly love, together with my sincere wishes for a joyous Christmas and a happy and prosperous New Year to you and all those you hold dear.

Fraternally,

G. WINDESHEIM.

DEPARTMENT OF NURSING

Conducted by Miss Stella Fuller, 566 Van Buren St., Milwaukee, Wis. Please address items of news and articles for this department to the editor of the department.



DOCTORS—AYE, AND NURSES TOO!

BY LOUISE F. BRAND.

We have grown from repairers to builders,
From mere saving of pitiful wrecks
To the seeing that ships for the ocean of Life
Go forth well-equipped for its storm and its strife,
Full-masted, with uncluttered decks.

And the light that has hastened our growing
Has been shed by a double-barred cross
Blood-red with the passion of serving mankind,
Of healing the suffering, the crippled, the blind,
Of saving where once there was loss.

Now that light must be stronger and brighter,
For through battle-clouds dense it must shine,
And the task of providing the fuel for the flame
Is a task from which no one exemption can claim
By our knowledge, 'tis your task and mine.

To the measure of our high devotion,
To the depth of our purpose and zeal,
To our self-imposed right not to follow but lead,
To our ready response to humanity's need
We attest with the bright Christmas Seal.

It is ours, then, to buy them and sell them,
Their mission to mankind insure;
For, knowing the truth of the lesson they teach,
It is square up to us both to practice and preach—
Prevention is better than Cure!



EDITORIALS

LET'S PROVE WORTHY.

NEVER in the history of the world has there been such demand on the nursing profession as there is today. Never has the duty of the nursing profession been so complex, for in addition to the call for service in camps and on battlefields there is the increased need for public health nursing at home—the protection of our industrial army and of our children. In the face of this big world need, the trained nurse has reason for great pride but she has reason also for great humility. Big work means big responsibility as well as big opportunity. It calls for the earnest consecration of the very best ability of every member of the calling to which the world at large and medical men in particular are looking for such important service. It calls for a daily remembrance of the prayer recommended for social workers: "Lord, keep us from being bumptious."

**Don't forget the 3rd, 1918, Liberty Loan.
Save your money. We must win this war.**

NURSES, ENROLL!

NURSES of Wisconsin! You are needed for active service in the army nurse corps. The American Red Cross has about 15,000 enrolled nurses but many of these are not available for active service for various reasons.

Of the total number of graduate nurses in the United States—about 80,000—only 3,500 have so far been assigned to duty in army service and of this number about 1,500 are in France.

Within the next year 20,000 nurses will be needed for service in this country and in Europe.

The Red Cross should have on file the names of *thousands* of nurses who could respond on short notice.

The medical men of this state are responding in huge numbers—many of them giving up a practice which it has taken years to build up. Shall it be said that nurses from the Badger State are slow to answer their Country's call?

If you are a registered nurse write Miss Stella Mathews, 566 Van Buren St., Milwaukee, for an application blank for Red Cross Nursing Service.

If you are *not* registered write Miss Anna Haswell, Madison, Wis., for advice. If you believe that you are more needed in your present place of employment, put the facts up to the State Red Cross Committee and leave the decision to them.

It will be an everlasting disgrace if we fail now—when we are so much needed.

**Don't forget the 3rd, 1918, Liberty Loan.
Save your money. We must win this war.**

LETTERS FROM THE FRONT.

In these days, when everyone's thoughts are with the soldiers at the front, there is keen personal interest in the work of those nurses who are privileged to be where our thoughts are. Letters from Wisconsin nurses now in army camps in this country or seeing active service abroad are always seized upon eagerly and passed from hand to hand. The personal chatter and the personal impressions of the work are of special interest to nurses and in order that this pleasure may be shared as widely as possible, a number of recent letters have been secured for publication in this issue.

Ft. Riley, Nov. 20, 1917.

My dear Miss Mathews:—

Just a line before going to sleep, to let you know we arrived here and are more than pleased with everything.

The chief nurse Miss Harding is very pleasant, our home accommodations are good. I had the surprise of my life when I saw the Fort. I, of course expected barracks, tents, etc., instead we found a small town made up of hospitals, and residences. Judging from the dinner we had tonight I think we will be well fed. There are about 50 nurses here now, reports say there are 52 cases of meningitis, 100 of pneumonias, mumps and measles.

We go on duty in the morning somewhere.

Our trunks arrived this evening; Miss Campbell forgot her check so was unable to get her trunk, but was allowed to take some clothes from it at the station.

As I am very tired tonight; will close and will write more about it at an early date.

Regards to all,

B. ROBERTS.

Ft. Riley, Kansas, Nov. 23, 1917.

My dear Miss Mathews:—

We're all here and on duty, Miss Talty and I are on a convalescent ward for *most everything*. Most of our patients are about and able to wait on themselves, a

few are very ill and need much attention, we are not working hard—getting 4 hours off duty during the day. The night nurses work from 7 to 7 and work quite hard. Some of the day nurses are working harder than Miss Talty and I are just now, I think. I know the nurses who are with spinal meningitis are working very hard and so are they who are with measles and pneumonia, but we are getting more nurses every day and it will very soon be better.

Just now we are living in a dwelling house that has been turned into bed rooms all way through and is not so convenient as might be in all things, but a nice new nurses' home is on the way and I know it's going to be just lovely. They tell us we will be in it in 30 days. We have plenty of nice new white linen to work with and both patients and nurses are happy. Miss Harding, the chief nurse is very, very nice. She was pleased to know we had our immunity slips with us, etc. Some of the nurses came without these. They seem very important at this end of the line. I cannot say much more about the camp for I know so little of it. When we are more acquainted with the place I will tell you more.

If any more nurses go to camp please have them take their own caps along as it takes some time for the red cross cap and cape to get here and they like the nurses to wear their school cap in the mean time. I have sent for mine to be forwarded to me.

With regards to all, from

OLGA LUCKS.

Camp Dodge, Tues. Even.

Dear Everybody:—

Well here we are all safe and sound in Camp Dodge. Am awfully tired but am so surprised and happy with every thing, just don't know how to start to tell you folks all about it.

There are thirty-four nurses here now, we have steam heat, electric lights and a *bath tub*. Have curtains on our dressing room windows, real lace ones. We are going to sleep outdoors on the sleeping porch, twenty of us, also have a piano, victrola and *napkins*. The dining room had about four large bunches of cut flowers, can't imagine where they came from. We work seven hours, 7—9 on duty and 2—7 or 7—2 and then off the rest of the day. Miss Brunk is in the eye, ear, nose and throat ward. Misses Myrseth and Zollmon in the surgical ward. I'm with the pneumonia and typhoids. We have forty patients, four nurses and three corps men. About fifteen of the pneumonias are negroes. Wednesday evenings we have French class for 45 minutes. Thursday evenings a dancing teacher comes, Friday we are all invited to the movies in the Y. M. C. A. The nurses are planning a play, it just keeps on like this all the time.

Love to all,

Sincerely,

NETTIE A. HAWLEY,

Base Hospital,
Camp Dodge, Iowa.

Camp Dodge, Iowa, Nov. 22, 1917.

My dear Miss Mathews:—

I was unfortunate enough to miss the girls in Chicago. They left at ten and I didn't reach there until ten-thirty so left at eleven twenty. This is really a wonderful place and I know we will all enjoy the life here very much. The hospital and the nurses barracks are all in one so that we will not have to go out of doors in stormy weather. The halls are the longest I have ever seen—really we can walk miles in them and it is no trouble to get lost but quite a little to find yourself again as every one here seems to be as strange as we are.

We work on seven hour shifts—for instance yesterday I worked from 7 A. M. to 2 P. M. with a half an hour for lunch—today I worked from 7 A. M. until 9. A. M. I will go back at 2 P. M. and work until seven.

We are encouraged to associate with the officers, and some of them are here every night to dance. It seems that dancing is the one thing to do in an army camp, so we are having a dancing master here twice a week, on Mondays and Thursdays; we have a beautiful victrola and many good records, so have plenty of dance music.

We have French classes twice a week also—so really we are a busy lot and have not much time to be home-sick.

We launder all of our underwear—the only laundry work done for us are caps, uniforms and collars. The caps are pretty and becoming to all the girls and I am positively mad about the capes. They are blue lined with red, and they look so pretty over the white uniforms. I can hardly wait for mine to come from Washington.

The officers are going to entertain the nurses, in their barracks for Thanksgiving dinner—they are also planning a large party for us as soon as their new quarters are finished. So you see we are leading a society life as well as an army life.

Thank you so much for the nice letter which you sent me last week. I appreciated it very much.

With kindest regards to all whom I know at the Club,
I am

Very sincerely,

ALICE NORTON, A. N. C.,

Army Base Hospital,
Camp Dodge, Iowa.

Camp Dodge, Nov. 25, 1917.

Dear Miss Mathews:—

The work at Camp Dodge certainly is interesting but quite different from anything I have done before. There are twenty wards of forty to fifty patients each, so I was told. I have not been around very much as yet and still am very apt to get lost in the many corridors connecting the different wards.

I was put in one of the surgical wards Tuesday noon, and was on day duty until Friday morning. Friday evening I was put on night duty in the surgical ward of forty patients. Besides myself there are two corps men on duty nights in the ward. All bed patients are allowed

to smoke in bed and a conglomeration of things is being kept under the pillows of most of them. It oftentimes is the only place where they can keep their pipes, tobacco, papers, etc., as there are only a few tables and a few chairs in the ward. Besides everything has to be kept out of sight for inspection and it is "beautifully out of sight underneath a pillow."

The patients are quite cheerful and very appreciative. Quite a few are operative cases. The corps men serve the meals to the patients. They are brought into the ward on a serving cart and the portions are dished out to the individual patient from the cart. Knives, forks and spoons are called "tools" and are all marked Med. Dept. U. S. A., while all the dishes have the insignia of the medical department on the rim.

There are seven night nurses on duty, some of the wards have no night nurse, only corps men, or even are without those, if the patients are very ill.

The nurses' quarters have all the modern conveniences of the city, so have the wards. That certainly is more than they have at Camp Shelby, Miss., where my sister is working. There they have to work by lamp light and not so many of them as we have electric lights here per ward.

The food at the camp is not bad. No waste whatsoever is allowed. At the mess tables and also the nurses' tables no food is allowed to remain on the plate. If that happens it is served to the individual again for the next meal. Those are strict rules and we girls are certainly careful not to leave anything on our plates.

There is a large Victrola in the dancing room and last evening after supper I discovered some of the most wonderful records of Galli Curci, Gluck and Zimbalist, etc. Up to then, I had only heard dance records as so many of the girls take dancing lessons; dance music is all the vogue. There also is a piano in the house.

Miss Mathews, I certainly am not sorry that I was sent to Camp Dodge. I only do hope that when the Base Hospital is called that we may go along.

Thanking you for all your kindness. I am

Respectfully yours,

GERTRUDE ZOLLMANN.

Camp Dodge, Tues. A. M.

Dear Miss Mathews:—

Just came off duty and found your nice newsy letter here. It seemed good to hear from home.

We are all kept quite busy but Miss Campbell insists that we get all our time off duty. It seems awfully hard when we have so many things to do we hate to leave the ward.

My first two days were spent in the pneumonia and typhoid ward, since then I have been in the officers' ward. We have twenty-four patients and we three nurses keep going every minute we are on duty. Not that they are so sick but just waiting on them. Most of the cases are tonsilleotomys. Some LaGrippe, few rheumatics and two fractured tibia's. The corps men do no nursing in this ward and that is what makes it so hard for us.

Miss Adams, chief nurse of the Presby. Hosp. (Base Hosp. 13), Chicago, is here; arrived Sunday evening. She is here just for the experience.

I feel that I am more than fortunate for I am working with her. We make about 20 beds together each A. M. and she tells me how things were in Europe while she was there. She went over with the Murphy unit and returned a year ago.

Wednesday night we all go to an entertainment given by engineers 313, in their mess hall. Thursday we eat Thanksgiving dinner with the Medical Officers.

Miss Campbell is just splendid. We girls from Milwaukee sleep out doors though the nights have been cold. Was going to write home for some soft woolly blankets to sleep in the army blankets are like boards. They are heavy and have no warmth, have four on my bed and am still cold but Miss Campbell told us at lunch yesterday that she had asked her friends in Des Moines to help us out, and they have promised us soft comforters and hot water cans.

Miss Zillman is on night duty, Miss Myrseth in the acute medical ward, Miss Brunk in the eye, ear, nose and throat ward, Miss Norton in the "mumps ward".

The fare is very good. The commanding officer, Major Cooper, has notices up every where to the effect that everybody must eat everything they take on their plates or have it brought back to them at the next meal.

The hardest problem here is to know what to do with any garbage. We have seven garbage cans on the porch off each ward and the same here at the nurses quarters. Each one labeled, one for paper, one for string, one for hair, one for dressings, one for bananas, one for orange, and apple peels, etc. If we were to put any garbage in the wrong can it would mean being confined to our quarters for thirty days or being court martialed. I think I'll put everything in my trunk, and take it all back to Milwaukee with me!

I must not forget to tell you the army will launder only our uniforms and caps. The rest we wash in the bath room. Every day is wash day here.

Miss Constantine just arrived and has gone on duty. She is rooming with Miss Brunk and we will see that she is properly initiated into the various ins and out of army life or as much as have been able to absorb in this one long week.

Just one more word about garbage. Teach the nurses to distinguish string from banana peeling as the disposal of refuse seems to be quite a problem here.

Must go to lunch now. Love to all the girls and would like very much to hear from Miss Ashby also would like Miss Nifer's address.

Received the mail from Waco, thank you. The girls all want to be remembered.

Sincerely,

NETTIE A. HAWLEY.

P. S.—I don't think Miss Hawley has emphasized garbage as much as she should have. Everybody learn all they can about garbage!

A. BRUNK.

"Somewhere in France."

Dear Friends of the Wisconsin Anti-Tuberculosis Association:—

Have been for the past 7 weeks working with the Tuberculosis Division of the American Red Cross, and have just completed the equipping and organizing of the Edith Wharton Sanatorium. You no doubt know something of this lady and her work. It is said that this particular sanatorium will represent probably the best permanent institution of its kind to be turned over to the French when the war is ended. Patients for this Sanatorium are to be supplied through the Paris tuberculosis dispensaries and Victor C. Vaughan, Jr., will be the first medical director.

At the request of Dr. Wm. Charles White, Chief of the Tuberculosis Bureau, I leave within a day or two for a southern city to establish and equip a sort of cantonment for the housing and care of the tuberculous portion of repatriees now swarming through the Swiss border. It is estimated that from 1,000 to 1,500 arrive daily and that at least 5% are tuberculous. This work promises to be most interesting. Will do my best to see that you hear about some of it.

I wish to thank you for your expression of good will, and will say that in my spare moments my thoughts wander back to dear old Milwaukee and Muirdale. I do hope that the standard of service is being maintained and that some day I may return to the work I left.

I know your annual meeting was a big success. Wish I had some of the machinery of the W. A. T. A. to assist me in this new job I am about to undertake. I know you cannot spare Dr. Dearholt but can't you send a few others? The picking is mighty slim here. Remember me with kindest wishes to all the folks.

In haste,

BELLIS.

Address (Hdq. Amer. Red Cross, Paris, France).

NEWS ITEMS AND PERSONALS.

Miss Minnie Ahrens, director, Bureau of Nursing, Central Division American Red Cross was in Milwaukee the 17th, 18th and 19th of November.

Coming here from Rockford, Illinois, where a most successful state meeting of the Illinois Graduate Nurses' had been held October 14th, 15th and 16th.

While here, Miss Ahrens met with the Directors of the State Graduate Nurses' Association, the Nurses of Base Unit No. 22, the Educational Committee of the Red Cross Chapter of which Mrs. J. Cary James is chairman and the State and Local Committees of the Red Cross Nursing Service.

We trust much good may come from these many conferences.

On November 19th, ten of Base Hospital No. 22 nurses were released for temporary service at cantonments, five going to Ft. Riley, Misses Violet Talty and Olga Lucks

from Milwaukee County Hospital; Miss Margaret Campbell, Children's Hospital; Miss Blodwyn Roberts, private duty nurse, Milwaukee, and Miss Agnes Bill, Public Health Nurse, Oshkosh. Five going to Camp Dodge, Miss Nettie Hawley, Miss Gudrun Myrseth, private duty nurses, Milwaukee; Miss Alma Brunk, Health Department, Milwaukee, Miss Gertrude Zallman, Muirdale Sanatorium, and Miss Alice Norton, private duty nurse.

DODGEVILLE.

About that same time Miss Mathild Krueger of Neenah, President Committee of Nurses' Examiners of the State Medical Board and Miss Ella McGovern, private duty nurse, Milwaukee, went to Waco for Public Health work. Both of these young women have had service with the Red Cross previous to this. Miss Krueger in Serbia and Miss McGovern at Dayton at the time of the severe storm and flood.

Miss Stella Fuller did missionary work for the State Nursing Committee of the Red Cross while in Green Bay for a Thanksgiving vacation.

Local Nursing Committees are to be appointed in La Crosse, Eau Claire and Green Bay. This will greatly facilitate the enrollment of nurses throughout the state.

November 13th at the regular county meeting of Milwaukee County Nurses held at the Nurses' Club the Association pledged \$300.00 to the Y. M. C. A. in their drive to obtain money for war work. We hope the nurses will keep this in mind.

At a special meeting of Columbia Hospital Nurses' Alumnae it was voted to give \$125.00 toward the building fund of Columbia School for Nurses. It was further agreed that the Alumnae should work toward endowing a bed for Nurses.

The next regular meeting of Milwaukee County Nurses' Association will be held December 11th at 2:30 P. M.

A special meeting of the State Association is called at the Nurses' Club for the purpose of revising the institution and by-laws.

District Associations to be formed throughout the state. In this way becoming a better correlated working body.

This war may mean the supreme sacrifice of money to us. The call is for self-denial—service—sacrifice. Let us as nurses not fail.

More nurses are to be sent to Roumania to supplement the Red Cross Commission which sailed from Van Couver in August. Miss Keenan of San Francisco will be in charge of the Unit.

Ashland County has appropriated \$40,000 and Iron County \$30,000 for a joint tuberculosis sanatorium.

The County Boards of Lincoln, Waupaca and Chipewaga Counties have voted to continue the employment of county nurses.

The La Crosse County Sanatorium will be open for patients in January or February.

The Madison Tuberculosis Sanatorium was ready to receive patients on December 1st. This institution is the gift of Dr. C. H. Vilas and fills a long felt need in Madison.

Patients will be admitted from any part of the state. Only such charges as are necessary to cover the actual cost of caring for patients will be made.

BOOK REVIEWS

ORAL ROENTGENOLOGY—a roentgen study of the anatomy and pathology of the oral cavity. By Jurt H. Thoma, D. M. D., lecturer on oral histology and pathology and member of Research Department, Harvard University Dental School. Instructor in Dental Anatomy, Harvard University Medical School. Captain Massachusetts State Guard Hospital Unit. Oral Surgeon Robert Bent Brigham Hospital. Visiting Oral Surgeon, Long Island Hospital. Member of National, State, and Local Dental Societies and Interstate Association of Anesthetists. Fellow in the American Academy of Dental Science. Associate Fellow of the American Medical Association. With three hundred and eleven illustrations. Ritter & Company, Boston, Mass, 1917.

This book is evidently meant for a text or reference book for beginners, who are taking up X-ray diagnosis in disease of the jaws. It consists principally of the author's idea of the reading of X-ray records of these parts, with examples to illustrate. It covers this field only. There is nothing of the technique of the X-ray laboratory, showing the beginner how these records are made or best obtained. It is presumed, we suppose, that the roentgenologist has received this technical instruction before going in for diagnosis. The therapeutics and technique for the application of the ray, in diseases amenable to X-ray treatment, are not taken up, but as far as the book goes it is certainly letter perfect, and an addition to the Literature in its presentation of facts.

PROBLEMS OF SUBNORMALITY. By J. E. Wallace Wallin, Ph. D., director of Psycho-educational Clinic, Board of Education, St. Louis. With an introduction by John W. Withers, Ph. D., Superintendent of Public Schools, St. Louis. XVIII. 485 pages. Cloth, \$3.00.

This book by Dr. Wallin, who has spent almost eight years in a continuous clinical study of defective children in institutions for feeble-minded, epileptic and insane, and in university and public school clinics; who has had practical experience in the organization of public school classes for feeble-minded, backward, and other types of defective children; and who has offered courses on subnormal children and clinical psychology in a number of institutions, will be welcomed by superintendents of public schools and institutions for the feeble-minded,

epileptic, insane, delinquent and criminal; by teachers in special classes, psychologists, educationists, sociologists, child welfare workers and physicians.

The writer has worked out a consistent plan of organizing the different types of special classes for different types of subnormal children, the practical serviceability of which has been demonstrated in a large school system.

The larger educational, social, preventive, eugenic and state problems involved in the treatment of the feeble-minded and epileptic are discussed.

The book contains the reports of the St. Louis committee on special schools and the committee on defective children of the Missouri Children's Code Commission, for which there has been a large demand; and the recommendation of which will find very wide distribution throughout the country.

The book contains a number of graphs and tables.

FRACTURES OF THE LOWER EXTREMITY OR BASE OF THE RADIUS, by Lewis Stephen Pilcher, A. M., M. D., LL. D., of Brooklyn, New York, consulting surgeon, Bushwick, German, Jewish, St. John's and Bethany Deaconess Hospitals, Norwegian Deaconess Home and Hospital, New York Skin and Cancer Hospital, Editor of the *Annals of Surgery*. 132 illustrations. J. B. Lippincott Co., Publishers, Philadelphia and London.

A very clear exposition of the mechanics resulting in fracture and displacement at the wrist joint with methods of reduction and splinting. There is nothing new offered as to reduction of these parts, and it does seem to the reviewer that anyone so interested in fractures should have at least mentioned the advantages to be enjoyed in setting these fractures under the fluorescent screen, as long as the help of the ray has been invoked for diagnostic purposes.

SKIN DIPHTHERIA.

At Richmond, Va., during September, October, November and December, 1916, skin lesions that were at all suggestive of diphtheric infection were swabbed, and cultures were made. Also there was a wholesale swabbing of sores of all sorts. Out of 191 swabs examined, thirty-four were positive for diphtheria. This represents 17 per cent. of positive cultures, as compared with 23 per cent. positive during the preceding year. Pure cultures were isolated in eleven cases, all from schoolchildren, no two of them were in the same family, although several attended the same school. Virulence tests in seven cases were positive. Each culture was grown on broth for about a week at 37 C. (98.6 F.) and then injected subcutaneously into the abdomens of two guinea-pigs, one of which received antitoxin. In no instance were there serious after-effects in the animal given antitoxin.—*J. A. M. A.*, Nov. 24, 1917.

A spoonful of the powder of nettle seed drank in good wine, doth assuage all pains of the grief of the matrix.

The Wisconsin Medical Journal

Volume XVI

MILWAUKEE, JANUARY, 1918

Number 8

TRANSACTIONS
OF THE
SEVENTY-FIRST ANNUAL MEETING
OF THE
STATE MEDICAL SOCIETY OF
WISCONSIN
AT MILWAUKEE, OCT. 2, 3, 4 AND 5, 1917.

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2nd Vice-Pres., I. G. BABCOCK, Cumberland.

3rd Vice-Pres., J. F. PEMBER, Janesville.

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ROCK SLEYSTER, Waupun.

*T. H. HAY, Stevens Point.

ALTERNATES TO A. M. A.

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T. W. NUZUM, Janesville.

M. R. WILKINSON, Oconomowoc.

†J. GURNEY TAYLOR, Milwaukee.

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THE COUNCIL.

* Deceased.

† Special Appointment.

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 G. WINDESHEIM, Kenosha.
 W. F. ZIERATH, Sheboygan.
 H. E. DEARHOLT, Milwaukee.

SESSION OCTOBER 2, 1917, 8 P. M.

PRESIDENT: The meeting will please come to order. We will first have the roll call of the delegates.

SECRETARY ROCK SLEYSER, Waupun: Inasmuch as we have had the signature of the delegates on the registration book, I think that can be taken as the roll call, if there are any who have not signed the registration book, they will please come forward and do so, as this will take the place of the roll call.

DR. HOYT E. DEARHOLT, President State Medical Society of Wisconsin, addressed the House of Delegates as follows:

Inasmuch as the management of the affairs of this Society and the determination of its policies are now vested in the House of Delegates, I have not included in the preparation of my address, which is to be read before the general assemblage, any discussion of matters pertaining to administration. As there are some definite recommendations I should like to present, however, I have taken for granted your permission to bring them before you at this time.

MEDICAL DEFENSE.

Sufficient time has elapsed since the establishment of liability insurance as a feature of membership in the Society to enable us to judge by study of our actual past experience whether it should be continued indefinitely. Personally, I have questioned if the need is so great as to warrant its conduct upon its present basis. Because my viewpoint is not representative, inasmuch as I am not in private practice and thus not personally affected by lia-

bility of just or unjust suits, I have refrained from voicing objections. There are, however, many difficulties in its management which affect the very structure, ideals, and standing of the Society. I should like to recommend, therefore, that provision be made by this house for detailed study extending, perhaps, through the coming year. This should lead to the formulation of definite recommendations to be presented to the Delegates at the next annual meeting.

I hope that no one will read into this recommendation even an implied criticism of the manner in which the committee has conducted its work. The committee's function has been administrative in carrying out the expressed wish of the Society. Furthermore, whatever doubts may be raised against the policy of the Society's insuring its members against malpractice suits, none can be raised concerning the great service which the committee has rendered at great personal sacrifice to its members.

MEMBERSHIP.

Some of the most valuable contributions to medical science have been made by men who were not Doctors of Medicine—Pasteur furnishes a notable illustration. There are, today, connected with medical educational institutions in the state, men who are qualified in every way, except the possession of the degree in Medicine, to fellowship in this and county medical societies. I am convinced that whatever steps may be necessary should be taken to modify the rules relating to membership, even though this take us to the regulations of the national body, to make men and women, learned in the collateral sciences, eligible to membership in the Society.

HISTORY OF WISCONSIN MEDICINE.

Attention has frequently been called to the fact that the passing of each year decreases the possibilities of gathering from original sources, and recording in permanent form, much invaluable data on the early history of Wisconsin medicine. At least one committee has been appointed for the purpose but nothing, so far as I know in the way of tangible accomplishment, has resulted therefrom. This has been due, in my opinion, largely to the fact that no money was provided with which to carry on the costly and laborious task of collecting and editing the material in an attractive manner. I believe that an enterprise of this sort, calls for the employment of at least part-time services of a professional investigator and writer.

I recommend that an effort be made to interest the state historical society, a research fellow in the university, or to secure funds from a source within or without the Society with which to finance whatever work may be undertaken in direction of the above.

PRESIDENT: We will now proceed to the reports of the committees. The first report is that of the Committee on Public Policy and Legislation, Dr. Edward Quick, Chairman.

DR. EDWARD QUICK, Milwaukee: Mr. President and Gentlemen: I have no report to make other than the one submitted to our secretary and published in this pamphlet, excepting to say that I believe that the work of the Committee on Public Policy and Legislation cannot be properly and efficiently carried on, without some sort of paid worker at Madison. There is such a volume of material which goes into the committees, and advances so far in the committees before it comes to the attention of our committee on Public Policy and Legislation, that the work is doubled. Bills are reported out of the committees and get to the floor of the House or the Senate before they come to our attention at all.

The Madison member of the Committee was very faithful in his work, but many things escaped him. Mr. Bradley of the Anti-Tuberculosis Association assisted in finding out what bills were introduced, but even then matters had advanced far in many cases before they were called to our attention. And I believe that at the next session of the Legislation we should have a paid lobbyist of the State Medical Society, who will ferret out and report to the Committee on Public Policy and Legislation what is going on.

The Committee on Public Policy and Legislation had no bills introduced. They acted in the capacity of watchdogs.

REPORT OF COMMITTEE ON PUBLIC POLICY AND LEGISLATION.

Your committee has had a good deal to do in legislative matters during the past year, although it cannot point to much that was accomplished. This may be due to the fact that the State Medical Society through its legislative committee did not attempt to secure any particular laws. We take it that we have no burning wrongs to correct, and no pressing reforms to promulgate. The Medical Practice Act was allowed to stand without attempt to modify it. It probably could not have been improved, and we always stand to get something worse.

Your committee however was attentive to all legislative matters relating to the medical profession and to public health policies. We reviewed many measures, influenced in the best way we could the passage of some, had some changed, and we were successful in having a few very objectionable measures defeated in committee. Early in the session we took a hand in Senate Bill No. 167 relating to access to hospitals by Physicians and Surgeons of different schools of practice. This bill was introduced by Senator Reinholdt. The animus was not to make way for "pathies" and "isms" in the hospitals, but rather to reopen the doors of hospitals to men in the regular profession who have by incompetency or questionable practice been denied the use of the same. The penalty for excluding any physician or his patient was to be a fine of from \$100 to \$500 and liability to civil action for substantial damages. We opposed this measure because on the face of it, it was evil in design. All hospitals in the state were promptly notified and repre-

sentatives from many of them presented their objections in committee. The forced opening of hospitals to cults and to untrustworthy members of our own profession is not to be tolerated. We are glad to report that the bill was defeated in committee.

A bill relating to dead bodies No. 381-S was offered in committee. The provision for the disposition of unclaimed bodies was so unusual as to practically stop the study of human anatomy in Wisconsin. The matter came to our attention first through Professor Bardeen who was much exercised regarding it. We added our mite to his great influence and the bill was killed in committee quite as dead as the unclaimed bodies which it sought to give formal burial.

The Central Council of Social Agencies proposed a measure relating to the separation of mother and child. The central idea was the reduction of infant mortality by forcing the mothers of illegitimate children to care for and nurse if possible their children for a period of six months. No doubt the proposed law would reduce infant mortality, and I know of no argument which can overcome this.

Objections were raised to the following points:

1. The length of the period for keeping the baby with the mother.
2. The method of appointment of the Advisory Committee.
3. The composition of the Advisory Committee.
4. The exclusion from the Committee of any person "who is interested in the ownership or administration of any organization licensed to place children out for adoption."
5. "Economic condition shall in no wise be considered sufficient reason for the separation of mother and child."

We favored the proposed law but it never got out of committee.

We dare say the time is not far distant when the state will throw proper safeguards about illegitimate children and all children for that matter. While there is a debauch in the destruction of human life at the present time, we can hope that the pendulum will swing far in the opposite direction when sanity is again on the throne.

The State Board of Health secured the passage of 105A—Chapter 117—Laws of 1917—relating to the diagnosis of communicable diseases. In substance a physician may be fined and on second offense his license may be revoked for failure or refusal to diagnose any case of communicable disease enumerated in Section 1416-1 of the Statutes where the exercise of ordinary skill and bacteriological examination would have been of material value in disclosing the presence of such disease.

We opposed the penalty feature of this bill. It is wrong. To take away a physician's license is to take his life. You may fine him, double or quadruple his fine, jail him for a year, but to take his license for all time

is to destroy him and his family, and it is a cruel and unusual punishment forbidden by the Federal Constitution. Our courts will not uphold it. Severe punishment should be provided for the second offense but it should still be reasonable. It is easy to say "Take away his license" but such a penalty surpasses all reasonable bounds.

Your committee rendered all aid in their power to further legislation for the Wisconsin Anti-Tuberculosis Association. We were gratified in seeing passed two measures which received our support, viz.:

1. \$75,000 for establishing a new sanatorium north of the Central line in Wisconsin.
2. \$100,000 for building and equipping an infirmary at the State Sanatorium at Wales.

No. 340-S creating 1417-M of the Statutes relates to the reporting and treatment of venereal diseases. Bear in mind that gonorrhoea and syphilis are now reportable diseases, or will be as soon as the State Board of Health furnishes blanks for that purpose. If a person afflicted with either disease in a communicable state stops your treatment, you will be required to report him or her to the Board of Health. The Board of Health will forthwith apprehend the culprit, place him in a State or County Institution for treatment. This is good legislation. It is advanced legislation. We are interested to see if it will work.

During the year we did many other things. We assisted in securing \$5,000 for Medical Extension. We tried to influence congress to abrogate the patents on Salvarsan. We requested the County secretaries and councilors to further the army medical bill to give the sanitarians of the army opportunity to use modern science in its problems.

It may be of interest to know of the law 1412B and 1412C, Chapter 110, Laws of 1917, to the effect that applicants for medical license must file verified statements with State Board of Medical Examiners that they are familiar with the public health laws of the state, and that a card bearing the names of all reportable, communicable diseases must be posted conspicuously in every hospital and in every physician's office.

Dr. Prince, the Madison member of our committee, rendered valuable service in ferreting out bills of interest to us. In spite of this many bills had advanced too far in committee before coming to the attention of your committee. Mr. Otto F. Bradley of the Anti-Tuberculosis Association gave us great assistance in this matter. We believe, however, the State Society should provide a paid worker for the early part of each session for the purpose of bringing to the attention of your legislative committee all matters relating to their work.

Signed: EDWARD QUICK, *Chairman*,
J. P. McMAHON,
L. H. PRINCE.

PRESIDENT: Gentlemen, you have heard the report of the Committee on Public Policy and Legislation. What shall we do with it?

DR. L. M. WARFIELD, Milwaukee: I move that the report be accepted.

Motion seconded.

Motion put and carried.

PRESIDENT: The next report is that of the Committee on Publication, Dr. A. J. Patek, Chairman. Dr. Patek is not here. Dr. Sleyster, is there any supplemental report?

SECRETARY: There has been nothing sent in since the pamphlet was published, Mr. President.

REPORT OF PUBLICATION COMMITTEE.

To the House of Delegates, State Medical Society of Wisconsin.

Comment testifying to the quality of our publication in this past year is almost superfluous. To those who read its pages one need not address himself; to those who do not, and thereby lose sight of much that the physicians of this State are offering to the profession at large, one may say a word only of exhortation.

The State Journal has risen from a humble beginning, modestly conceived by a well intentioned coterie of physicians whose only desire was to elevate the professional tone in their State. The venture proved successful in attaining this end. A financial loss in the beginning, its association with the State Society helped to give it a solid footing, so that later—when its ownership was bodily transferred to the State Society, the Journal was no longer a liability, but an important and valuable asset.

The Journal is now part of the State Society, indeed—it is that part of the Society that is speaking to every member throughout the year—not once annually. For this very reason it has an interest to the individual that is not second even to that of the Society itself. Were the Journal—through any unfortunate or unforeseen circumstance—to be suspended or discontinued, and were we to return to a status quo ante, would the loss not be felt keenly? I dare say its restoration would be a matter of no great delay.

The position the Journal has attained as the State profession's medium is, undeniably, fixed and firm. The few thoughts expressed here are meant not for the one who follows the Society's work, but for the professional "slacker"—the man who does not know how he is befriended by his Society; who must be told that this organization is maintained for his benefit—though he believes it not; that this Society has banded together for his protection—though he knows it not; that for a paltry sum he may make friends with 2,000 other men of similar aims—did he but aim to see, unblinded by indifference.

The report of the past year's work is contained in the monthly issues of the publication. No words of commendation are needed. Our editor, Dr. Louis M. Warfield, has continued his successful leadership, and the

ability of Dr. McMahon is evidenced by the report which follows.

A complete audit of the Journal's books, dating from the time of the transfer of the Journal to the State Medical Society on January 1, 1910, to October 1, 1913, was made by public accountants and auditors, and presented to the Society at the annual meeting in 1913. Their statement certified that all receipts had been accounted for, all cash deposited, and that all disbursements were supported by voucher checks, properly recorded, and that the Journal's accounts were found correctly kept and in balance.

There is appended to the present report an audit of the Journal's accounts covering the 3 year period, October, 1913, to October, 1916.

Respectfully submitted,

A. J. PATEK,
Chairman Publication Committee.

THE WISCONSIN MEDICAL JOURNAL.

FINANCIAL STATEMENT (CONDENSED).

August 1, 1916, to August 1, 1917.

Cash balance August 1, 1916.....\$ 333.32

Receipts—

State Medical Society.....	\$1,504.50		
Advertising	2,808.28		
Subscription	35.50		
Halftones, drawings, etc.	2.60	4,350.88	\$4,684.20

Disbursements—

Equipment	\$ 16.50		
Printing	2,155.95		
Salaries	1,439.50		
Commissions	613.94		
Postage	250.00		
Office supplies and expenses	40.38		
Miscellaneous general expenses	72.25		
Halftones, drawings, etc.	12.43	4,600.95	4,600.95
Balance on hand August 1, 1917.....			\$ 83.25

Assets.

Office equipment	\$ 175.13		
Cash in bank.....	83.25		
Accounts receivable	2,607.18		
Merchandise	42.12	\$2,907.68	

Liabilities.

Accounts payable	\$1,230.62		
Credit balance on advertising accounts	42.93	1,273.55	

Assets exceed liabilities..... \$1,634.13

THE WISCONSIN MEDICAL JOURNAL.

PUBLISHING COST STATEMENT (CONDENSED).

August 1, 1916, to August 1, 1917.

Income from Publishing—

Advertising, gross charges.....	\$3,627.27	
Less discounts	79.27	
Net income from advertising	\$3,548.00	
Subscription	37.20	
Total income from operation....		\$3,585.20

Publishing expenses—

Printing	\$2,580.37	
Salaries	1,311.00	
Commissions for securing advertising contracts	800.20	
Postage	251.20	
Cuts, drawings, etc.....	9.01	
Office supplies and expenses.....	40.38	
Miscellaneous general expenses....	66.75	
Total publishing expenses.....		\$5,058.91

Net cost of publishing the Journal..... \$1,473.71

To Members of the State Medical Society:—

The deficit of \$1,473.71 represents the cost to the State Medical Society of circulating 22,044 copies of the Journal, or about 6 7/10c a copy.

Dr. A. J. Patek, Chairman of Publication Committee,
Wisconsin Medical Journal, Milwaukee, Wis.

DEAR DOCTOR:—

Pursuant to your instructions, I have made an examination of the books of the Wisconsin Medical Journal, for the period from October 1, 1913, to July 31, 1916.

In my opinion, the accounts herewith presented show the correct condition of the Journal's affairs at July 31, 1916, and also that a proper accounting has been made therein of all receipts and disbursements.

The operations of the Journal have resulted as follows:
Net value of Journal's assets Sept. 30, 1913...\$1,492.83
Net cash received from Society Oct. 1, 1913, to July 31, 1916

Total of

Balance representing net cost of publishing...\$4,872.23
The number of copies distributed to members was 60,423
The cost per member per copy

Very truly yours,

D. A. PARROTT,
Chartered Accountant.

PRESIDENT: If there are no objections we will take for granted your acceptance of the published report, and pass on to the next report, which is that of the Committee on Medical Defense.

Dr. Seaman is likewise not here. Is there any supplemental report, Dr. Hall?

DR. S. S. HALL, Ripon: I believe not, Mr. President. The report is printed in the book. I do not know that I have anything to add unless it is with relation to the financial standpoint, which will come out in my report. I can say that during the last year our expenses have been in the neighborhood of \$3,700. That is for the previous year's work. Those bills have all been paid, and I think that we will be able to settle the bills that have just come in for this year's work, with the money that is in the treasury. The attorney was very much interested in the work, and after telling him that it would be necessary to confine the expense to the amount of income for the year, he very kindly acceded to that proposition. So I think that the matter will go along smoothly.

REPORT OF COMMITTEE ON MEDICAL DEFENSE.

Milwaukee, Wis., October, 1917.

To the Members of the House of Delegates, State Medical Society of Wisconsin, Milwaukee.

GENTLEMEN:—

In presenting this subject to you, an intelligible classification of the work thus far accomplished by your Defense Committee is of greater value than any detailed report. Therefore, without further comment, we place before you the result of our efforts, since 1908, and in so doing desire merely to call your attention to an enviable record of achievement.

(The bracketed numbers are those of the secretary's files, and are inserted for easy reference.)

Total number of cases considered since 1908.....	97
Cases tried before jury, with verdict for defendant (2, 18, 20, 27, 30, 32, 34, 37, 45, 52, 53, 69, 75, 82).....	14
Suits dismissed and non-suited (upon trial).....	29
This includes Case No. 48, dismissed by Supreme Court, in which an \$800.00 verdict was rendered by lower court.	
Jury disagreed.....	3
Further course of these uncertain.	
Cases lost.....	2
No. 46. Damages assessed, \$300.00.	
No. 89. Lost, and appealed to Supreme Court.	
Cases now pending.....	28
(4, 19, 25, 28, 36, 38, 40, 42, 43, 44, 49, 57, 59, 60, 61, 62, 63, 65, 67, 70, 77, 81, 83, 84, 89, 91, 92, 93).	
Will probably not come to trial.....	10
Cases brought to our attention but withdrawn and placed in the hands of other insurance companies.....	3

Cases entered but withdrawn or refused because they did not come under the Society's jurisdiction.....	9
(7, 8, 13, 14, 47, 48, 79, 94, 96).	
Suits threatened but no action begun.....	6
(80, 85, 86, 87, 88, 97).	

A second tabulation has been prepared to indicate the wide range of cases that have been presented. There is a considerable discrepancy in the number, as compared with above table, but this is accounted for in part by duplication of suits, and by the unknown character of some threatened actions.

Improper and Negligent Medical and Surgical	
Diagnosis and Treatment.....	15
Won (18, 32).....	2
Dismissed (10, 31, 39, 71, 75, 48, 82).....	7
Pending (19, 38, 42, 44, 57, 81).....	6
Improper Treatment of Fractures.....	26
Pending (4, 25, 36, 40, 43, 59, 60, 67, 83, 89).....	10
Dismissed (5, 6, 9, 10, 12, 16, 23, 46, 74, 76).....	10
Withdrawn or not defended (7, 8, 35, 68, 72).....	5
Won (37).....	1
Improper Treatment; Needless Amputation	
Charged.....	7
Pending (44, 63, 77).....	3
Disagreement (69).....	1
Won (27, 45).....	2
Dismissed (90).....	1
Responsibility for Development of Post-operative	
Hernia.....	2
Pending (70).....	1
Disagreement (50).....	1
Improper Treatment of Newborn.....	2
Dismissed (41).....	1
Lost (46).....	1
Improper Diagnosis in Case of Insanity.....	1
Pending (65).....	1
Improper Treatment of Mastoid Disease.....	2
Pending (49, 62).....	2
Improper Treatment of Confinement.....	4
Dismissed (21).....	1
Disagreement (24).....	1
Won (2).....	1
No Jurisdiction (79).....	1
Responsibility for Death from Anesthetic.....	4
Won (30, 34).....	2
Dismissed (56).....	1
Pending (84).....	1
Leaving Foreign Body in Wound after Operation.....	3
Won (20).....	1
Pending (60).....	1
Dismissed (22).....	1
X-ray Burn.....	2
Pending (28).....	1
Dismissed (29).....	1
Miscellaneous (1, 3, 13, 26, 33, 47, 52, 53, 68, 85).....	10

GILBERT E. SEAMAN,
SIDNEY S. HALL,
ARTHUR J. PATEK,
Committee on Medical Defense.

PRESIDENT: Gentlemen, you have heard the report. If there are no objections it will be accepted and placed on file. Hearing none, it is so ordered.

The next number on the program is the election of a Committee 12 on Nominations, one from each district. These nominations are made from the floor, are they not, Mr. Secretary?

SECRETARY: The nominations are from the floor, by calling the districts.

PRESIDENT: The nominations are commonly made from the floor, and we will call for nominations, one member from each councilor district. I now call for nominations from the 1st District. You will have to call them out, Mr. Secretary.

SECRETARY SLEYETER: The 1st District is Dodge, Waukesha, Washington and Jefferson Counties. Someone who lives in this district will nominate a man for position on the Committee.

PRESIDENT: If there are no nominations from that district we had better pass that for a moment.

DR. NOBLE: I am from Waukesha, but I do not understand this matter.

SECRETARY: This committee nominates the different officers for the Society, and reports to the House of Delegates later. Dr. Noble is here, and Dr. Sears, of Beaver Dam, is here.

DR. NOBLE: I will nominate Dr. Sears of Beaver Dam.

PRESIDENT: Are there any other nominations from the 1st District? If not, we will call for nominations in the 2nd District.

The name of Dr. J. S. Keech, Racine, was placed in nomination.

PRESIDENT: Dr. Keech, of Racine, has been nominated. Are there any other nominations from the 2nd District? If not, the nominations will be declared closed, if there are no objections.

Nominations are now in order from the 3rd District.

The name of Dr. Head, of Madison, was placed in nomination.

PRESIDENT: Dr. Head is not down as a delegate. The delegates are Lorenz, Meade, Gilbert and Stebbins. Dr. Nye is here from that district.

DR. NYE: I will nominate Dr. J. S. Pember.

DR. J. S. PEMBER: I will place in nomination Dr. Nye.

DR. L. M. WARFIELD, Milwaukee: Do the members of this Nominating Committee have to be members of the House of Delegates?

PRESIDENT: I think they do, strictly speaking.

DR. NYE: It has been so in the past.

SECRETARY: The election is made by the House of Delegates, and I think it would require a member of the House of Delegates on the Nominating Committee.

DR. NYE: I nominate Dr. Pember. He is a member of the House of Delegates.

PRESIDENT: Dr. Pember has been nominated. Are there any further nominations? If not, and if there are no objections, we will declare the nominations closed.

The next is the 4th District. Are there any nominations from the 4th District?

SECRETARY: There is one member from the 4th District, Dr. Leitzell.

DR. E. H. TOWNSEND, New Lisbon: I nominate Dr. Leitzell.

Nomination seconded.

PRESIDENT: Are there any further nominations? Hearing none, and if there are no objections we will close the nominations.

The next District is the 5th District.

SECRETARY: Dr. Knauf is here, and also Dr. Kemper, of Manitowoc, is here.

DR. W. G. KEMPER, Manitowoc: I nominate Dr. Knauf.

PRESIDENT: Dr. Knauf has been nominated. Are there further nominations? Hearing none, if there are no objections we will declare the nominations closed.

PRESIDENT: The next district is the 6th District.

DR. H. W. ABRAHAM, Appleton: I nominate Dr. F. M. McGauley of Fond du Lac.

PRESIDENT: Dr. McGauley of Fond du Lac has been nominated. Are there further nominations? If not, and there are no objections, we will declare the nominations closed.

The next district is the 7th District.

DR. SPENCER BEEBE, Sparta: I nominate Dr. E. H. Townsend of New Lisbon.

DR. E. H. TOWNSEND, New Lisbon: I nominate Dr. Spencer Beebe of Sparta.

DR. BEEBE: Recall my name. I nominated Dr. Townsend first.

PRESIDENT: Dr. Townsend of New Lisbon has been nominated. Dr. Beebe, you withdraw your nomination and insist upon it?

DR. BEEBE: I withdraw my name.

PRESIDENT: Dr. Townsend of New Lisbon has been nominated. Are there further nominations? If not, and there are no objections, the nominations will be declared closed.

The next district is the 8th District.

DR. T. J. REDELINGS, Marinette: I would like to place in nomination the name of Dr. L. Rothman, from the 8th District.

PRESIDENT: Dr. Rothman has been nominated. Are there further nominations? If not, and if there are no objections, I declare the nominations closed.

The 9th District.

DR. PELTON: I nominate Dr. Jones of Wausau.

PRESIDENT: Dr. Jones of Wausau has been nominated. Are there further nominations? If not, and there are no objections, I will declare the nominations closed.

The 10th District.

DR. R. U. CAIRNS, River Falls: I nominate Dr. Larson.

PRESIDENT: Dr. Larson has been nominated. Are there further nominations? If not, and there are no objections, I declare the nominations closed.

The 11th District.

SECRETARY: Dr. Ground, of Superior, is here. He seems to be the only one present.

DR. L. M. WARFIELD, Milwaukee: I nominate Dr. W. A. Ground, of Superior.

PRESIDENT: Dr. Ground, of Superior, has been nominated. Are there further nominations? If not, and there are no objections, I declare the nominations closed.

The 12th District.

DR. D. J. HAYES, Milwaukee: I nominate Dr. Charles H. Lemon of Milwaukee.

PRESIDENT: Dr. Lemon, of Milwaukee, has been nominated. Are there further nominations? If not, and there are no objections, I declare the nominations closed. That is all that is needed?

SECRETARY: Yes, excepting that it might be well for this Committee to get together immediately after this meeting, and arrange for another meeting some time tomorrow. They will bring in their report on Thursday morning of this week, to the House of Delegates.

PRESIDENT: The next business before the meeting is the report of the Committee on Public Health and Instruction, Dr. Edward Evans, La Crosse, Chairman.

DR. EDWARD EVANS, La Crosse: I have nothing to report other than as printed in the printed manual of the secretary.

REPORT OF COMMITTEE ON HEALTH AND PUBLIC INSTRUCTION.

House of Delegates,

Wisconsin State Medical Society.

GENTLEMEN:

Your Committee on Health and Public Instruction can report little special activity during the past year.

The time and energy of all of us have been absorbed by war activities. Through the Wisconsin Anti-Tuberculosis Association, the Crusader has been sent for another year to each member of the Society. The same agency sent out Health Leaflets to a limited amount. The total expenditure has been \$112.00, leaving an unexpended balance of \$188.00.

Respectfully submitted,

E. EVANS,

Chairman, Committee on Health and Public Instruction.

PRESIDENT: If there are no objections, the report as printed will be accepted. Hearing none, it is so ordered.

The next business is the report of the Committee on Medical Education, Dr. C. R. Bardeen, Chairman. Is Dr. Bardeen present?

DR. L. M. WARFIELD, Milwaukee: Dr. Jermain is present.

DR. L. F. JERMAIN, Milwaukee: Mr. Chairman and Gentlemen. Supplementary to this printed report, I want to state that the question of the status of medical students, which was in abeyance at the time this report was written by Dr. Bardeen, has been settled. I presume that you all know from the journal of the American Medical Association what the present situation is. The War Department has requested all medical students of the 2nd, 3rd and 4th years, of Class A medical schools, and the interns in the hospitals, to join the enlisted medical reserve corps. All medical students of the 2nd, 3rd and 4th years, and interns in hospitals, have to join the enlisted medical reserve corps, and as such are directed to continue their studies and serve their internships. After the studies are completed they are members of the medical reserve corps, and as such are under the orders of the United States Government. The same is true with interns. The Deans of medical schools are instructed to report to the War Department after each semester the standing of the students. If any student fails in his studies, or fails to advance to the next semester's work, or fails to advance from one year's work to another, he may, automatically, be drawn into the army service at that time. So that the medical students who fail in their studies, in a manner forfeit their right to remain as members of the enlisted medical reserve corps, and may be drafted into the service.

PRESIDENT: Dr. Jermain, as I understand it, this applies to the men who have been drafted?

DR. JERMAIN: Just the drafted men, yes.

PRESIDENT: Gentlemen, you have heard the supplemental report. Is there anything further? If not, and there are no objections, the report and supplemental report will be accepted and placed on file. Hearing none, it is so ordered.

The next order of business is the report of the Committee on Necrology, Dr. L. M. Warfield, Chairman.

DR. L. M. WARFIELD, Milwaukee: I have nothing further to report. I intended to bring the report down to date by adding one or two names that were published in the journal in the month of September. These should be added to the published report of the Committee on Necrology here. I submit that as the report. I shall bring it down to date by having those names added, and have them placed on file.

REPORT OF COMMITTEE ON NECROLOGY.

October, 1916—August, 1917.

Dr. Stanton Allen, a graduate of Columbia University, New York, died on October 18, 1916, at Hood River Oregon, where he had resided for the past ten years, aged 58 years. He was a former member of Milwaukee County and the State Medical Societies.

Dr. Frances J. Bock, Lancaster, died on October 19, 1916, aged 43 years. She was born in Lancaster and educated in the public schools of that town. Studied medicine at Hahnemann Medical College, graduating in 1906. She was a member of Grant County and the State Medical Societies.

Dr. E. H. Grannis, Menomonie, died on October 15, 1916, of pernicious anemia, aged 62 years. He was a graduate of Hahnemann Medical College, Chicago, graduating in 1875. 1876-1877 practiced at Chatfield, Minn. He had resided at Menomonie since 1877. Served for many years as surgeon of the 3rd Regiment, W. N. G., and for two years was Surgeon-General of Wisconsin. Member of Dunn County and the State Medical Societies.

Dr. James P. Connell, Fond du Lac, died suddenly of heart disease on October 22, 1916, aged 54 years. He was born in the town of Meeme, Manitowoc County, February 22, 1862. Received his early education in Manitowoc County, taught school for a number of years, and took up the study of medicine in the office of Dr. D. W. Hayes of Manitowoc, studied at Northwestern University Medical School, graduating in 1887. He first practiced at St. Cloud, coming to Fond du Lac in 1894. He was a member of Fond du Lac County and the State Medical Societies.

Dr. William F. Scott, Pt. Washington, died on November 28, 1916. He was born at Stoughton, Mass., removed to Stevens Point with his parents at an early age. He was a graduate of the Oshkosh Normal School. Taught school at Cedarburg, and was superintendent of schools of Ozaukee County for six years. Studied medicine at Rush, graduating in 1887. Practiced at Pt. Washington 21 years. Member of Ozaukee County.

Dr. Frederick D. Bentley, Portage, died on December 23, 1916, aged 52 years. He was born in the township of Lemonweir, Juneau County, Wisconsin, October 22, 1864. He was a graduate of Mauston High and of Rush Medical College, 1886. He located at Portage that year. In 1889 he was appointed assistant superintendent, State Hospital for the Insane at Dunning, Ill., but returned to

Portage the next year. He was health officer of Portage for a number of years. Member of Columbia County and the State Medical Societies.

Dr. James R. Barnett, Neenah, died on January 29, 1917, aged 75 years. Dr. Barnett was born near Waukesha in 1842. He served throughout the Civil War in the 1st Wisconsin Cavalry. Graduate of Rush Medical College in 1868. He served one term in the State Assembly, was superintendent of schools four years, and president of the State Bank of Neenah. He was a member of Winnebago County and the State Medical Societies.

Dr. O. W. Burns, Winneconne, died on January 17, 1917, aged 66 years. Death was due to heart failure. He was born in Washington, Maine, where he spent his early boyhood, and received his early education. He was a graduate of Dartmouth Medical School, Hanover, N. H., in 1877. He was a member of Winnebago County and the State Medical Societies.

Dr. Charles L. Kissling, Milwaukee, died on January 19, 1917, aged 59 years. He was born in Milwaukee, the son of Dr. Leopold Kissling, an early practitioner of that city, and educated in the public schools. He was a graduate of the University of Munich, 1886. He was a member of the Milwaukee School Board for sixteen years. Member of Milwaukee County and the State Medical Societies.

Dr. Charles R. Stanhope, Milwaukee, died on February 8, 1917, of tuberculosis, aged 36 years. He was born in Milwaukee and educated in the public schools of that city. He received his medical education at the old Wisconsin College of Physicians and Surgeons, graduating in 1905. He was a member of Milwaukee County and the State Medical Societies.

Dr. Henry Ogden, Evanston, Illinois, for many years located at Ft. Atkinson, died on February 17, 1917, aged 74 years. He was born at the foot of Lake Koshkonong, May 9, 1843. At the outbreak of the Civil War he was attending Milton College, and enlisted in the 24th Wisconsin Volunteer Regiment, serving throughout the war. He was a graduate of Rush Medical College in 1881. A former member of Jefferson County and the State Medical Societies.

Dr. Moses J. White, former head of the Milwaukee County Hospital for the Insane, died at Hartford, Conn., March 16, 1917, aged 57 years. Born at Hartford, Conn., February 28, 1860. He attended the graded and high schools of that city, Princeton University and LaFayette College, and received his medical education in the Medical Department of the University of New York, graduating in 1884. 1884-1887 he was assistant physician at Manhattan Hospital for the Insane, New York. In 1887 he came to Milwaukee as assistant physician at the Milwaukee Hospital for the Insane. After one year's service he was appointed head of the institution. Dr. White was professor of mental diseases in the old Wisconsin College of Physicians and Surgeons. He was a member of Milwaukee County and the State Medical Societies.

Dr. Alexander Montgomery, Eau Claire, died on April 11, 1917, aged 54 years. He was a native of Glencary, Ont., Canada, a graduate of the Illinois College of Medicine in 1898, and established the Montgomery Sanitarium at Eau Claire. He was a member of Eau Claire County and the State Medical Societies.

Dr. D. F. Bothwell, Pardeeville, died on April 13, 1917, aged 51 years. Dana Ferdinand Bothwell was born at Mauston, Juneau County, Wisconsin, November 4, 1866. He was a graduate of Ensworth Medical College, St. Joseph, Missouri, in 1892. He first practiced at Morrell, Kansas, and Erwin, South Dakota, and later at Kingston and Pardeeville. He was a member of Columbia County and the State Medical Societies.

Dr. Galen Rood, Stevens Point, a pioneer physician of northern Wisconsin, died at his home at Stevens Point, on April 4, 1917, aged 87 years. Galen Geer Rood was born at Jericho, Chittenden County, Vermont, January 14, 1830. He came west with his parents at the age of 8, traveling by the Erie Canal and carriage to Chicago. From Chicago the family moved to Madison, and from there to Wausau. Dr. Rood's education was obtained in the district schools and the University of Wisconsin, where he prepared to enter Ohio Medical College, Cincinnati. He graduated from that institution in 1856. His course of study was supplemented with practice in the Marine Hospital at Cincinnati, during the epidemic of cholera in 1855. He was city physician of Stevens Point for twenty-nine years, and had practiced his profession for more than sixty years, and was a member of Portage County and the State Medical Societies.

Dr. Samuel W. French, Milwaukee, died on June 30, 1917, aged 67 years, of angina pectoris. Born at Derby Line, Vermont, near the Canadian border, January 13, 1850. His early boyhood was spent in Boston, where he attended the Boston Latin School. After graduation he entered Harvard, and received his A. B. degree in 1873. After a year in Europe he returned to Boston, and entered Harvard Medical School, graduating in 1878. He served two years as interne in the Boston City Hospital. He came to Milwaukee in 1880, and entered upon the practice of medicine in which he was actively engaged until the time of his death. 1891-1892 he was president of the Milwaukee Medical Society. He was one of the founders of the Milwaukee Emergency Hospital and a member of Milwaukee County and the State Medical Societies.

Dr. Thomas H. Hay, Milwaukee, until recently medical director of River Pines Sanatorium, Stevens Point, and for many years a well known physician of Milwaukee, died on June 29, 1917, of myocarditis, aged 56 years. He was born in New York City August 2, 1861. He studied at the New York College, and later entered the Medical Department of the University of the City of New York, graduating in 1883. After graduation he served as interne at the Ward's Island Hospital, until January, 1884, when he came to the Northern Hospital for the Insane at Oshkosh as assistant physician. Dr.

Hay remained there for one year, when he returned to New York, and entered upon general practice, which he continued until 1889, when he came to Milwaukee. For several years after his return to Wisconsin, he was physician in chief of the Milwaukee Hospital for the Chronic Insane. From 1894 to 1898 he was assistant commissioner of health of Milwaukee. In 1906 Dr. Hay gave up his practice at Milwaukee and established the River Pines Sanatorium at Stevens Point, where he remained as medical director until recently, when ill health compelled him to relinquish the work. Dr. Hay was a member of Milwaukee Medical Society, its secretary for several years, and its president 1901-1902. Member of the Medical Society of Milwaukee County, and later of the Portage County Medical Society, and the State Medical Society. He was a member of the Council of the State Medical Society for the 9th District.

Dr. James Louis Williamson, Milwaukee, died on July 16, 1917, aged 61 years. He was a graduate of the Northwestern University School, Chicago, in 1881. He was formerly a Fellow of the A. M. A., a member of Milwaukee County and the State Medical Societies.

Dr. Samuel Birbeck, Gratiot, died suddenly July 3, 1917, aged 50 years. He was a graduate of the College of Physicians and Surgeons, Keokuk, Iowa, in 1898, a Fellow of the A. M. A., a member of LaFayette County and the State Medical Societies.

Dr. Oscar Houck, La Crosse, died on June 12, 1917, aged 57 years, of pernicious anemia. He was a graduate of Jefferson Medical College in 1896. Formerly a member of the A. M. A. and the State Medical Societies. He was an honorary member of the La Crosse County Medical Society.

PRESIDENT: Is there anything further with reference to this report of the Committee on Necrology? If not, and if there are no objections the report will be accepted and placed on file. Hearing no objections, it is so ordered.

The next order of business is the report of the Committee on Social Insurance, Dr. A. W. Gray, Chairman.

DR. A. W. GRAY, Milwaukee: The Committee has nothing to report other than what is contained in the printed pamphlet, except to emphasize to the members, perhaps, that this is a very live question, and one which we will undoubtedly be face to face with within a comparatively short time.

REPORT OF THE COMMITTEE ON SOCIAL INSURANCE.

To the House of Delegates of the State Medical Society of Wisconsin.

The Committee on Social Insurance appointed by the President on your authorization begs leave to make the following report:

The Committee held five general meetings during last winter and spring. At these meetings the subject of compulsory health insurance was studied in all of its bearings, and especially in its possible influence upon the practice of medicine. The conclusions of the Committee, which at this time must be considered as opinions only, will be given later in this report.

Legislation at Madison has been closely watched by the Committee, but there was at no time any likelihood that a law covering the subject would be put upon the statute books. Three bills were introduced, but none was even seriously considered in committee. A joint resolution of the senate and assembly, however, was passed which authorized the appointment of a committee of senators and assemblymen to study the subject and to report its findings and recommendations to the next biennial session of the legislature. This committee has been appointed, but as yet has held no sessions. It is likely that no very active work will be carried on by it during the present unsettled times. In the opinion of your Committee there is little likelihood that any legislature will be in the temper to take up seriously any social legislation of this character during the course of the war. We believe, however, that a committee of this society should be continually in existence and on guard, to see that no proper interest of the medical profession shall be put in jeopardy even in propaganda for such legislation.

Through the kindness of the Wisconsin Anti-Tuberculosis Association and its Executive Secretary, Dr. H. E. Dearholt, your Committee was given the services of Mr. George G. Goetz without cost to the society, to act as secretary for the Committee. The work of Mr. Goetz was invaluable in the exhaustive study that he made of the subject, in the bureau of information which he maintained for the Committee and in the efforts that he made to give the results of his and the committee's studies to individuals and to these county societies that asked for information.

In the above connection it may be said, now, in explanation, that it was necessary and proper for your committee to take an affirmative and constructive attitude in respect to the principle of proposed compulsory health insurance in order to bring information upon the subject before members of the society. An attitude of destructive criticism on the part of your committee, such as has been evident in many quarters after very superficial study, would have destroyed any usefulness in its work. Even when the opinions of your committee were in a formative state, as was the case during the early part of our studies and for that matter still is, it was necessary, and will continue to be necessary if the interests of the profession are to be conserved, for the committee to attempt to overcome an enormous amount of prejudice, prejudgment, lest this state of mind stifle constructive study and argument.

In the opinion of your committee many forms of social insurance are coming to us in the United States as they have already come to all of the great nations of the world except our own. One of the first to come, in some form, will be health insurance. Should the medical pro-

fession, with its innate conservatism, read itself out of court and shut the door to argument, it will not be in a position to conserve its own interest when the time for constructive effort comes. Your committee feels called upon to give this explanation of its attitude, as well as to voice the above warning, in spite of the fact that it has been acting in accordance with the resolution passed by the House of Delegates which approved of compulsory health insurance in principle.

In considering compulsory health insurance your committee has divided the subject into two parts, that is, first, study of the principle of compulsory health insurance, and, second, study of individual bills. Unless this division is kept clearly in mind, objections to individual sections of purely prospective statutes, which may never become statutes, are brought to the front whenever principles are under discussion. This makes orderly study or discussion impossible. In consequence your committee wishes first to take up briefly the principles involved and to state its opinions in relation to them.

Compulsory health insurance proposes that the state shall offer whatever medical services are necessary in the case of sickness to certain individuals working in the state and to their families, and shall indemnify them to a certain extent for wages lost through sickness if they avail themselves of such services, or possibly fulfill certain other conditions; and that the maintenance of the necessary insurance funds shall be compulsory upon the workers and their employers. This in the opinion of your committee is the *principle* underlying all proposed legislation for compulsory health insurance.

The broad question then is, is the medical profession in favor of state health insurance? The House of Delegates at its last annual meeting answered this question, in its representative capacity, in the affirmative. Your committee after months of study has come to the same conclusion recognizing fully that the primary significance to the medical profession in this proposal lies in the fact that the relation of the profession to the state will be profoundly changed. Instead of working as individuals, licensed under the police powers of the state to practice our profession in practical independence, we shall become part of the state machinery with somewhat restricted independence. There is no doubt that this will be the real beginning of state medicine which your committee thinks should be thoroughly understood.

In regard to the compulsory feature and to the fact that insurance will be limited to defined classes, your committee is of the opinion that discussion of these features has no place in a purely medical body. These are matters of state policy. As physicians ex-officio, that is, as citizens, we may favor state subsidized voluntary insurance over the compulsory form, for instance, but in the opinion of your committee discussion of such social questions simply wastes our time as medical men and divides us among ourselves. The question for us is whether we shall support or oppose state health insurance and this is the only question involved for us in the principle above set forth.

When the method and means of administering state health insurance is taken up the statement of the ques-

tion cannot be made as simple as the above. The bill proposed by the American Association for Labor Legislation has generally been taken as a standard. But no one can tell at the present time what the final proposal will be. It may very well be along entirely different lines from any yet suggested. Your committee is of the opinion, however, that here again there will be purely medical questions and purely social questions, and that as medical men we should not waste our time and influence where medical questions are not involved.

There are, however, certain conditions that will have to be met in any bill that will be acceptable to physicians. It will be necessary for the physicians of the state and their representatives to be ever on the alert to see that these conditions are fully met. As proposals crystallize full discussion and study will be in order, and it is to be hoped that unanimity will result so that medical men will be able to make their influence felt as an united body.

These essential conditions as your committee sees them are as follows:

1. Control by representatives of the physicians of all administrative features having to do with purely medical matters.

2. Freedom from responsibility on the part of physicians in any part of the administration which has to do with other than purely medical matters.

Under the two above conditions we shall insist upon our ideals of practice and can brook no interference by laymen; and cannot allow the confidential and personal relation between physician and patient to be interfered with by putting upon us any duties which might be incompatible with that relationship.

3. Equal opportunity for all regularly licensed physicians to practice under the insurance act if they choose.

4. Free choice by the insured of their physicians.

5. Adequate compensation to the physicians for service rendered, the physicians by the representatives to have a voice in determining at least the minimum compensation to be returned.

In presenting the above fifth condition your committee realizes that it is most indefinite and yet it cannot at the present time be otherwise. Of the different methods of compensation suggested the straight capitation method seems to the committee to be the most objectionable and to have the fewest arguments in its favor. But at the present time we believe it to be wiser to leave this condition indefinite but with the emphasis on "adequate."

In concluding this brief report your committee wishes to make a few suggestions, more or less related.

Some form of state health insurance is on the way. At the present time no one knows what form will be finally adopted. Until we do know, it is an impossible state of mind to be for or against an indefinite thing except in principle. Somebody, representing the profession and having the backing and confidence of the profession, should be on guard to conserve the interests of the profession; and if this committee does not measure up to the

requirements another should be appointed that will. The profession should stop fighting this at present formless thing called Compulsory Health Insurance unless we rescind our action in endorsing it in principle.

Finally, an united profession is very desirable from every point of view and for every professional purpose, but it is going to be supremely detrimental to our professional and financial interests if we cannot present an united front when the time comes to look out for our interests in this-matter.

Respectfully submitted,

A. W. GRAY, *Chairman*,
G. WINDESHEIM,
W. F. ZIERATH,
C. H. LEMON,
J. M. BEFFEL,
H. E. DEARHOLT,
Committee on Social Insurance.

PRESIDENT: You have heard the report of the Committee. Is there anything further? If there are no objections the report will be accepted and placed on file. Hearing none, it is so ordered.

The next order of business is the report of the delegates to the annual meeting of the American Medical Association. I think that none of them are present, are they, Mr. Secretary?

SECRETARY SLEYSER: There is nothing to add to the report as published, Mr. President.

PRESIDENT: If there are no objections, the report as published will be accepted and placed on file.

REPORT OF DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION.

Two of your delegates, Dr. Horace M. Brown and Dr. J. Gurney Taylor (alternate), registered for your state at the 68th Annual Meeting of the American Medical Association in New York City, on June 4, 1917. Dr. Sleyser was unable to attend because of work at home for the Council of National Defense.

We would respectfully call your attention to the necessity of the men elected as delegates attending the convention or else notifying their alternates sufficiently in advance so that arrangements may be made for our complete number of delegates to be present. Only one regularly elected delegate was present at this time, while the second member was an alternate to an alternate.

The importance of this honor conferred by the State Society upon its members by election, might be taken somewhat more seriously by those elected, in order that the State may have its complete representation in the House of Delegates of the Association.

Three days were set aside for the work of the House of Delegates. The first meeting was held on Monday, June 4, at 10 A. M., which was two days before the scientific sessions opened.

The opening general meeting was held on Tuesday evening, June 5. The second session of the House of Delegates was held on Tuesday morning and the third session on Thursday afternoon.

On the first day reference committees were appointed, to whom all routine and new business requiring considerable time, was referred and by whom reports were made consisting of a digest of their findings with recommendations for action. The following reference committees were appointed:

1. Rules and Order of Business.
2. Medical Education.
3. Legislative and Political Action.
4. Hygiene and Public Health.
5. Amendment to the Constitution and By-Laws.
6. Reports of Officers.
7. Credentials.
8. Miscellaneous Business.

The President, Dr. Blue, called attention to the desired medical preparation for our country, reporting that he had made appointment of three to the State Red Cross Committees. Two of the three members named were the president and secretary of the State Medical Societies. He also announced the appointing of a committee to outline recommendations for utilizing the services and facilities of the American Medical Association in preparation for war. A report was submitted by them which was endorsed.

Through the Secretary of the Association the services and co-operation of the American Medical Association were offered to the Surgeon-General of the U. S. A. and the Surgeon-General of the U. S. N. and all services and facilities for such assistance as may be in the power of the Association to render hereafter.

Your attention is directed to the change in By-Laws relative to credentials, which is as follows: "Credentials shall be of two parts. The first part shall be sent to the office of the Secretary of the American Association by the secretary of the Constituent Association, not later than seven days prior to the first day of the first meeting of the House of Delegates, and shall be a list of delegates and alternates for the Association."

Your attention is also directed to the action that places discretionary power in the hands of the editor relative to the acceptance of papers for publication in the Journal. The following resolution was adopted, covering same: "that all papers read at the A. M. A. session be treated as voluntary papers and that the same be published in full in the Journal, or rejected, or published in abstract, as may seem best."

The Council of Health and Public Instruction and their sub-committees on Social Insurance, Women's and Children's Welfare, Co-Operation with National Educational Association, Conservation of Vision, offered very excellent reports which should be read in order to be thoroughly appreciated. The same applies to reports from the Council on Medical Education, Council on Scien-

tific Assembly, Judicial Council and Committee on Red Cross Medical Work.

The Reference Committee on Hygiene and Public Health reported favorably on the resolution by Dr. Horace M. Brown that "The American Association urges on Congress of the United States the imperative necessity of steps being taken to abrogate all German patents on Salvarsan and allied products in this country, etc., etc."

It is impossible for us to present a detailed report of the proceedings and we, therefore, urge that those members who desire to acquaint themselves with the work of the Association read the transactions of the House of Delegates as published in the American Medical Journal of June 9 and 16. This will preclude the necessity of printing the proceedings in our State Journal which would only be a duplication.

We would further call your attention to the excellent character and broad scope of the work accomplished by the American Medical Association through its House of Delegates. The earnestness of effort and the harmony noted in the House of Delegates as well as the character and standing of the men who represented their States stood out prominently throughout this entire patriotic session.

Respectfully submitted,

J. GURNEY TAYLOR,
H. M. BROWN,
ROCK SLEYSYTER,

Delegates.

To Wisconsin Medical Society,
Dr. Rock Sleyster, Sec'y.
July 19, 1917.

PRESIDENT: The next business in order is the report of Delegate to Council of Medical Education, Dr. A. J. Patek, Chairman. Is there anything further to report, Mr. Secretary.

SECRETARY SLEYSYTER: Dr. Patek is unable to be present at this meeting, and has requested that another delegate be elected by the House of Delegates to take his place.

REPORT OF COMMITTEE ON MEDICAL EDUCATION.

Both Marquette University Medical School and the Medical School of the State University have had a year of increased usefulness. It is becoming more and more evident that Wisconsin needs liberal public and private support for medical education since thus alone can the medical standards be maintained in this State which we all desire. The large sums recently raised for medical education in Chicago do not lessen but rather increase the need for liberal support of medical education in Wisconsin. The more heavily endowed a school is the more apt it is to restrict the number of students admitted to each class. Quality not quantity is becoming more and more the aim in medical education and most of the heav-

ily endowed schools are restricting the number of students admitted to each class to one hundred students or less. The recent offer of the Carnegie Foundation to give a liberal sum toward the endowment of the Marquette University Medical School is an indication not only of the high value set on the quality of work now being done at this school by people from without the State but also proof that those who have studied medical education in its broader aspects with regard to the country as a whole feel that Wisconsin should be encouraged to do her share in this important field.

The heavy demands made by the war on physicians in civil practice for war service increase the need of facilities for medical education. It seems evident that for some years after the war is over there will be need for America to furnish physicians for civil practice in the stricken countries of Europe. The Medical Section of the National Council of Defense during the past six months has urged the officers of the medical schools to present as forcibly as possible to medical students the patriotic duty of continuing their medical education. It has been expected that some means of furloughing medical students subject to draft will be devised so that if the draft makes serious inroads upon the number of medical students in attendance a sufficient number may be furloughed back to the schools to keep up an adequate attendance. It is earnestly to be hoped that this will be done so that we can escape the serious mistakes along these lines already made in England and France.

At the meeting in 1916 of the House of Delegates, a resolution was passed requesting the Regents of the University of Wisconsin to institute post-graduate medical instruction under the direction of the Medical School of the University and the Extension Division. An appropriation of \$5,000 was made by the 1917 legislature to begin the work, and a course in clinical instruction in diseases of the chest is now being given in the Fox River Valley. The co-operation of the County Medical Societies is asked in placing this post-graduate teaching on a permanent basis.

Respectfully submitted,

C. R. BARDEEN,
L. F. JERMAIN,
J. VAN DE ERVE.

PRESIDENT: If there are no objections, the report as published will be accepted and placed on file.

The next business in order is the report of the Delegate to the National Legislative Council, Dr. G. Windesheim, Kenosha.

DR. G. WINDESHEIM, Kenosha: Mr. President and Members of the House of Delegates. I have nothing to add to the report as printed in the hand book. As you see, I was, fortunately or unfortunately, I don't know which, unable to be present at the meeting. But I should like to again emphasize to the medical profession of the state of Wisconsin certain phases that I have mentioned here to be of special interest to the State Medical So-

ciety, to-wit: that 65 medical schools and 19 state licensing boards have adopted the two years' college work as the minimum standard of preliminary education necessary for the study of medicine.

As to the matter of regulating the so-called cults and non-medical healers, I think that looking up the papers in the Journal of the American Medical Association, will give us a great deal of information on the subject.

REPORT OF DELEGATE TO NATIONAL LEGISLATIVE COUNCIL.

To the House of Delegates of the State Medical Society of Wisconsin.

Your delegate to the "National Legislative Council" regrets very much that circumstances did not permit his attendance at the Conference held in Chicago on February 5th and 6th, 1917, and consequently is not in a position to present a report based upon personal observations.

In reviewing, however, the proceedings of the Conference, as published in the Journal of the A. M. A. in the issues of February 17, pages 573 to 575, February 24, pages 656 to 657, and March 17, pages 871 to 874, one cannot help but realize that the papers and discussions were, as in former years, of intense practical value and well worthy of the careful perusal and consideration of every practitioner of medicine.

Of special interest to this society should be the statement made that, at present, sixty-five medical schools and nineteen state licensing boards have adopted two years of college work as the minimum of standard of preliminary education, necessary for the study of medicine.

Another item of interest is the advocacy of a practical examination of candidates, by the State Boards of Medical Examiners, in addition to written and oral examinations, especially along the lines of physical diagnosis and laboratory findings.

The report of the National Board of Medical Examiners would indicate the desirability of having such a board established officially, preferably perhaps in connection with a national bureau of public health.

The manner of regulating so-called medical cults and non-medical healers, is as much as ever a mooted question. The prevailing opinions appear to be that medical practice laws should establish certain minimum standards of education, ability and character, to be required of every individual who claims to do healing, no matter what the therapeutic measures may be.

On this question the papers by Dr. David A. Strickler of Denver, Colorado, and by the Hon. James M. Cox, Governor of Ohio, and the discussions following, are well worthy of consideration.

Respectfully submitted,

G. WINDESHEIM,
Delegate.

PRESIDENT: Gentlemen, you have heard the report of your delegate. Is there anything further? If not, and if there are no objections, the report will be accepted and placed on file.

The next order of business is the report of the Chairman of the Council, Dr. Edward Evans.

DR. EDWARD EVANS, La Crosse: Mr. Chairman and Gentlemen: My report is very short, but there are a few matters I should like to comment upon. In the first place, I should like to say to the House of Delegates how splendidly loyal the council is in their attendance. At the meeting in January last year every member except one was present.

I should also like to bring before the House of Delegates this point: If during the year you have troubles with relation to points of ethics, it is a good plan to bring them before the council in some way. Last year one of the councilors brought up a matter of unethical conduct on the part of a consultant, which was referred to the councilor from his district, and the matter was settled very nicely, and I think the man came around with a pretty nice apology, and I believe he is a better member since he found out that somebody was watching him. In this way we are able in a courteous manner to bring about a certain amount of discipline which is very helpful.

Another matter that came up was a question which we had referred, through our secretary, to the lawyer who looks after malpractice cases, Mr. Spooner. We find that the County Medical Society has absolutely no control over whom they shall admit into their Society. Provided they have a license from the state they may compel us to take them in. So far the man referred to has not started compulsion proceedings, because his lawyer was told that two or three malpractice suits would be started against him just as soon as he started suit for admission. However, you cannot always have that club to hold over a man of that type. I think something ought to be done about this. Our state law automatically admits a man to the County Society, Mr. Spooner says, as soon as he gets his license. I think I am right in that, am I not, Dr. Sleyster?

SECRETARY SLEYSER: Yes, sir.

DR. EVANS: It is perhaps a matter that could very well be left to Dr. Windesheim, or some other man equally well posted on the law. I am sure, however, that some steps should be taken to prevent this condition of things. Of course when a man is admitted to the County Society he is admitted to the State Society, and automatically admitted to the American Medical Association, and it is not right that we should not have some choice as to whom our members are, or who should be and who should not be members.

I was very glad tonight to hear the President touch upon the State Society's protective clause against malpractice. I was one of those who was enthusiastically in favor of it. It had certain things in its favor. I believe that ethically and morally it is wrong. Each man should be able to stand on his own feet. He should

be able to pay for his own protection. And it is not fair, and anyone who has paid attention to this subject, as things have gone along since we have had this protective clause, knows that the committee had to stretch their conscience a great deal, in several instances. In addition to that, I do not think it is fair that the great mass of the medical men who are not likely to have malpractice suits should be paying insurance for the surgeon who gets all the money anyway, and who ought to be well able to carry his own protection. I think that this matter should be taken up. It did pretty well as a help to secure members, but I think that the trouble with our Society, as I have said heretofore, is that we have too many members. So that I would like to see some steps taken to at least have this matter discussed. I am not going to enter into the pros and cons of it, because we have not the time, and this is not the place for it, I suppose, in this business meeting.

This is perhaps the only time I shall have, and perhaps it is my place as chairman of the council to say, at this time, when the country is in this most terrible war, and at the same time the most noble war that was ever waged, that we as citizens get behind our administration and do everything we can as citizens as well as doctors, to aid the great cause, because the speedier the end, the better it will be, and it must only end in one way.

And one of the things that I think we can all do is to look after the health of the people in our own communities. We know that in France, England and Germany and in all of the countries which are at war, in spite of the splendid work of the medical corps with the Army, terrific inroads are being made on the health of the civilian population. If this war goes on for some years, and twenty or twenty-five thousand of our men are called away from the profession in this country, just the same thing will happen here, perhaps in a lesser degree. And I believe the time is now ripe for us to take such steps as will conserve the health of the people of this country. I have in contemplation in our own county the taking of a health survey of the county, at least the rural district, and I believe this can be rather easily done all through the country. That will be making a start in the right direction, and then a social nurse could get a pretty good survey of the county, and in that way we would have some means of stopping threatened epidemics that we are bound to have. There are many other ways in which we can do our bit as individuals. Some of us are too old to get into the service, but we can do service in other ways. One thing that all of us should be able to do, and especially this House of Delegates and the members of the council, is to encourage the going into the medical officers' reserve corps. From the figures shown from the different states including Wisconsin, the percentages show that Wisconsin stands up pretty well; if Milwaukee was not a part of the state of Wisconsin, we would show up splendidly with the percentage outside of Milwaukee. I think we ought to get into the harness. A good many men will say, I am married, I have a family to support, and that sort of thing. I believe that that sort of a fellow can afford to go a good deal better than the fellow who has

just started in for 1, 2 or 3 years, and is just about getting a toe-hold, and who has to give it all up and come back and start all over again. I believe that every physician from the age of graduation to the age of 55—and I would like to make it 60, then I could get in—should be examined, and if he is physically fit, offer his services to Uncle Sam.

Amongst the doctors most of the men are pretty influential, and that is especially so in this House of Delegates. As you know, we are the pick of the profession in the state, or you are that are from the House of Delegates, and I believe that we have a big duty to perform this month in getting behind the liberty bond issue. We cannot buy many of them, but we can induce our rich patrons to do better than they otherwise would. That is one way in which we can help now. And I believe as citizens we should get busy in every way that we can. As a naturalized citizen of Uncle Sam's domain I would like to see the United States of America called the United States of the World, because we are the refuge for the whole world, and I believe we ought to appreciate that, and for the nation's weal push all we can and do our bit.

PRESIDENT: Gentlemen, you have heard the report. Is there any discussion at this time? If not, and if there are no objections, the report will be accepted and placed on file. Hearing no objection, it is so ordered.

Proceeding to the next order of business, we shall listen to the reports of the councilors. We shall hear from the 1st District.

SECRETARY SLESTER: Dr. Wilkinson is in the service. I have his report from the district, Mr. President. Dodge County shows a loss of 4, Jefferson County a gain of 3, Washington County a gain of 1, Waukesha County a loss of 2. This has been slightly modified. Washington County shows a gain of 4 now, and that would make a gain of 2 for the district.

The district is in very good condition.

PRESIDENT: Is there any discussion at this time? If there are no objections, the report will be accepted and placed on file.

The 2nd District, Dr. Windesheim.

DR. G. WINDESHEIM, Kenosha: Mr. President and Members of the House of Delegates. The work of the medical societies in the 2nd District during the last summer has not been up to the usual standard, and there are many reasons for this. I think the main reason is the present-day agitation about national defense, and war, and so on.

Walworth County is the only county, I believe, in the district that has kept up its membership, and they have the same number of members that they had last year, no gain and no loss, one removal, and one new member. The meetings, however, have not been as well attended as they have been in former years.

Kenosha County, which used to have a meeting every month, has not had a meeting for the last three months. Also for the reason that the members of the Society

were otherwise busy. A number of them are on the National Defense Committee, and a number of others have been examining physicians for the draft, and so on, and it has been absolutely impossible to get a meeting.

Racine County is the only county in my district that has had one good meeting, and that was held during the summer. At that meeting Racine County has taken up the question of support of the members of the families of the doctors who go to the front, with relation to some kind of a plan which they think, and I also believe, is superior to the so-called Maryland plan. This plan is that each physician in the county should give a certain percentage, 1-40 of one per cent, if I remember rightly, of his annual earnings, per month per man, towards a fund for the support of the members of the families of the doctors that go to the front. That should be given every month per man in the service, which figures out something like this: if a man's practice would amount to about \$4,000 a year he would pay \$1 a month per man in service. They have figured it out that it would give a fairly reasonable sum to the members of the families of those at the front. No one would be the judge of what a doctor is to give, except the doctor himself. The contributing physician is the one who states, my income is so much a year, and I will pay so much for the support of those families. I think the plan is a very good one, if it becomes necessary. I think under the present conditions it may not be necessary.

Kenosha County has a loss in membership of 3. That may be accounted for by two of the members having joined the army, and there has been one removal and one new member, and probably some of the delinquents will come in again before the end of the year.

Racine County has a loss in membership of 2, one removal and one death. That is all. Thank you, Gentlemen.

PRESIDENT: We will now listen to the report of the councilor from the 3rd District, Dr. F. T. Nye.

DR. F. T. NYE, Beloit: Mr. President and Members of the House of Delegates. The report as received by the secretary is as follows: Dane County last year had 111, and this year 108, a loss of 3. There is one delinquent and 3 removals, and 5 new members.

Columbia County had 31 last year and 29 this year, a loss of 2, 1 removal, 4 deaths, and 4 new members.

Green County last year 19, this year 19, no loss and no gain, one death, and one new member. Rock County had 54 last year, and 55 this year, a gain of one. There were 2 delinquents, 2 removals, and no deaths, and 5 new members.

Sauk County last year 20, this year 21, 2 delinquents and one removal, no deaths, and one new member.

This makes the total for the district last year 235 and this year 228, a loss of 7. I consider the district to be medically in very good order. In each county the meetings I think have been held about as usual, and with about the usual attendance.

There are always a few things that happen throughout the different counties. As was stated a short time ago,

the settlement of that one question of the doctor from Columbus, who apologized, in my estimation makes a better member for the Society for the future; it places him in a position to feel his equality, without any ill feeling.

There is one other subject that I think should come up here before the House of Delegates. The same subject came up last year in Madison. Our district this season will be invaded by a medical society. I went over the ground very carefully last year at Madison, at the meeting of the House of Delegates, considering this subject. This year, being the third year of the Tri-State Medical Society, it falls upon the state of Wisconsin to entertain the Society, and consequently they so voted, and I understand, not being present at the meeting at Dubuque, the idea was to meet in Madison next year. That is within my district. I pointed out last year the possibility of getting the medical meetings together, and that subject was discussed, because at that time the meeting was held only one week previously at Freeport, a short distance from Madison. It perhaps did make a little disturbance at the time for both meetings. Now this year, as I say, it will be held at Madison, probably during the month of August, as was announced at their meeting. At a meeting early in May or June at Madison the subject was discussed by the Committee for the purpose mainly of getting it as far as possible from our state meetings this year, as to date. Consequently they advised its being held in August. To go back just a little, at the meeting in Dubuque there was a large entertainment fund raised among the citizens of Dubuque for the entertainment of that meeting. Then the question came up as to whether or not, if they came to Madison, it would be necessary to raise a large fund for entertainment. I urged the committee to decide finally that at the outside a limit of \$200 ought to cover the necessary expenses in a meeting at Madison, knowing as I do, that Madison is an entertaining city, as well as a convention city, they are not in the habit of raising money for such purposes. Evidently, as a result of that decision, was why they concluded to visit Madison, knowing that there would not be much expense at the time, probably. Whether or not a local committee at Madison will raise a fund, I do not know. That is simply a question of the future. But I do know that in all probability there will be a large attendance, because you are meeting with a district from Illinois, which will now also include Iowa, and all are easily within reach of Madison. I shall expect to see a rather large attendance. But the idea of spending a large amount of money on the meeting I do not think will materialize.

Now the question is before the House of Delegates in a way, as to whether or not that meeting is going to interfere with our state meeting. Personally I see no objection whatever. I am an absolute believer in the necessity of medical meetings, and with my experience of nearly 40 years I have never seen any special ill-results from medical meetings, because the more meetings the more training physicians get for use in other meetings, and from such work and such building up we get better men. Our state meetings are in a way a

machine, and built up by machine men; this cannot well be avoided; it is an absolute necessity. A meeting of this nature has eliminated politics. It is simply a meeting of scientific men with the object of good fellowship. From it should come good results. I cannot see wherein there is any harm to come from a meeting of that Society. It will come to Wisconsin once in three years, and probably the dates will never be as close again as they were last year. And my idea of bringing the matter up at this time is that if there is opposition we should have it disposed of, and if there is not, well and good. I am simply interested as an official of our State Society, and have kept in close touch with the program and with the Society on various subjects, especially methods of defense to our Society, and have kept myself informed on the various moves, and used my own judgment as far as possible, as to the future results.

I do not think I have anything otherwise to report.

PRESIDENT: Gentlemen, is there any discussion of the report at this time? If not, we shall pass to the next report, that of the councilor from the 4th District, Dr. Wilson Cunningham, Platteville.

SECRETARY SLEYSER: Dr. Cunningham is not present.

PRESIDENT: The secretary has no report from the 4th District. We shall pass to the 5th District, Dr. Zierath, Sheboygan. Dr. Zierath is not present to give any report at this time, so we shall pass to the report from the 6th District, Dr. Abraham, Appleton.

The report from the 6th District was presented by Dr. H. W. Abraham, Appleton, Wis., as follows:

In the hurry of getting away I did not get my slip, but Dr. Sleyser will give the little there is to report, out of his record.

SECRETARY SLEYSER: Dr. Abraham's district shows a loss of 11. This is practically entirely accounted for in two counties, a loss of 4 in Brown-Kewaunee, and a loss of 12 in Winnebago.

DR. ABRAHAM: Some of these will be in. There has been a little slackness in the work by the secretaries, and this has caused some of the losses, 5 or 6 of them are due to men who have gone into the service early, and there is no way of reaching them. I tried to get the societies to carry the membership until such time as they could be reached.

The work has been of about the same nature as usual in literary work and other interests. I have not visited them to any great extent, except on the matter of medical defense principally, and I can see no retrograde movement there, or any great improvement in the general work of the Society.

There is one thing that I wish to speak of that I think is of interest to the Society, and that is this: part of this district has been selected for the first work along the line of post-graduate work which is carried on by the University of Wisconsin. You will remember that there was an appropriation of \$5,000 to be expended in that way, and the men at the head of that work have selected this district in which to work along that line.

We have had two meetings, and a third one is to come. There have been two days devoted to each of the cities of Fond du Lac, Oshkosh and Appleton to didactic and clinical work by the staff of the University, and I can say that the work has been very successful, especially in Oshkosh, and quite so in Fond du Lac, from the reports that I have gotten from different men, and not quite so successful in Appleton. This is due to the fact that other things have come in to vitiate the result there, over which we had no control. But from my experience there, and from the experience of others I think we are all thoroughly convinced that it is going to be a big success in the future. It will take time and labor to work the matter up, but the men who have attended these courses have been very well satisfied with the benefit they got out of them, and they came especially from the country districts. I think the attendance on the part of the country men has been very much better even than that of the city men. The work has been practical, and I am sure that it will be a success in the course of a very few years.

PRESIDENT: We will now listen to the report of the councilor from the 7th District, Dr. Edward Evans.

The report of the councilor from the 7th District was presented by Dr. Edward Evans, La Crosse, as follows:

Mr. President and Gentlemen: The 7th District is numerically in good shape. We have a gain of ten members this year, having 117 in our district at the present time, with a delinquent list of only 3.

We have not been doing very much scientifically. I hope that we shall be able to follow Dr. Abraham's district in the coming year, and secure some of the good work from the University Extension Division.

PRESIDENT: We will now listen to the report from the 8th District, Dr. Redelings.

The report of the councilor from the 8th District was presented by Dr. T. J. Redelings, Marinette, as follows:

Mr. President and Gentlemen: I am pleased to report that the 8th District is holding its own. We have a gain of one member in the District, and 3 delinquents.

Oconto County maintains an organization, although it is negative, the members coming to Marinette-Florence County for their scientific work and the scientific meetings.

Shawano County is in its normal state.

Marinette County adopted a new method of work this year, in so far as it has employed outside talent from the University Extension Courses, and Milwaukee talent to read papers at the scientific meetings. These meetings have been well attended and have been profitable, and my personal verdict is that it has been a good thing, but the meetings provided for by local talent went by default. Now whether that was due to lack of interest in our local work, or whether it was due to other interests in the community at the time, I am unable to say. Generally speaking, however, I would endorse the method of employing outside talent. The expense of this outside talent has been borne by the local

members in the city of Marinette, and it was approximately about \$10 a year in addition to the regular dues.

I think that the fraternal spirit in the Society is very good, and would report the 3 component societies of the 5th District as in flourishing condition.

PRESIDENT: Dr. Cunningham has come in since passing his district, and if there is no objection, I will call upon him for the report from his district.

The report of the councilor from the 4th District was presented by Dr. Wilson Cunningham, Platteville, as follows:

Mr. President and Gentlemen: There is nothing unusual to report from our district. We are going along about the same as usual, and doing about the same character of work. The membership, I think, has not appreciably changed. The losses are made up, I believe, by new members, with the exception of about 4 for the district.

We have had no district meetings, but, owing to the meeting of the Tri-State Medical Society being held in our neighborhood, at Dubuque, there was a very good attendance from our district at this meeting, and it was a very well attended meeting, and a very good meeting.

Our county societies hold their meetings regularly, and these meetings are very well attended. A good percentage of the membership attend each meeting of the different societies.

PRESIDENT: We will now have the report for the 9th District.

SECRETARY SLEYSER: The 9th District is in splendid condition, and shows a gain of ten. They have taken in 15 new members, and there are only 4 delinquents in the district.

PRESIDENT: We will now have the report of the councilor from the 10th District, Dr. Cairns.

The report of the councilor from the 10th District was presented by Dr. Rollo Cairns, River Falls, as follows:

The 10th District shows a total gain of one member. Barron-Polk-Washburn-Sawyer-Burnett shows a gain of 5, Chippewa a gain of 4, Dunn-Pepin a loss of 3. The Dunn-Pepin County Society is in an upset condition over the fact that the man who was president of the Society a year ago has been convicted of a statutory crime, and the Society is not yet settled over the division in this matter, and we cannot expect to get this Society in the best order for two or three months to come.

Eau Claire County Society shows a loss of 6, delinquents, due chiefly to lack of activity on the part of its officers.

Pierce County shows a gain of 2. The Rusk County membership is unchanged. Rusk is a nominal society, doing no real active work.

St. Croix County shows a loss of one member.

PRESIDENT: We come now to the report from the 11th District. Dr. Dodd has been called here and was called back home. His report will be presented.

The report of the 11th District, Dr. J. M. Dodd, counselor, is as follows:

The condition of the medical organization of the 11th District is about the same as last year, with the exception of a loss of seven members. The one great issue before the profession has been the war and its call for medical service in the army. At a meeting of the State Council of Defense Medical Section on August 27th, held in Milwaukee, it was decided to ask the councilors to make a canvass of their respective districts, ascertain who could be spared from their communities, how many desired to enter this service, and to make arrangements for their examination by the Medical Examiner of the Army, who was soon to make an itinerary of the state. I immediately set about to make this survey in my district, with the following result:

This district comprising the counties of Ashland, Bayfield, Iron, Douglas, Langlade, Oneida, Forest, Vilas, Price and Taylor, has 10,993 square miles in area, about one-fifth the total area of the state. Its population according to the census of 1910, was 162,412. There are 135 doctors, or one for each 82 square miles, and one for each 1212 in population, but as there has been an increase in population since 1910, it would be fair to estimate that there is one doctor for each 1,500 people.

The ages of the doctors is as follows: from 25 to 30, 8; from 30 to 40, 34; from 40 to 50, 42; from 50 to 60, 32; from 60 to 70, 17; and over 70, 2. Forty-one of these medical men have been examined for the medical service of the army and 16 have been commissioned, and doubtless, a greater part of the number examined will be commissioned, as the examiner has not accepted for examination those who were clearly not eligible, or who for personal reasons declined the government's invitation to enlist in the Medical Officers' Reserve Corps. According to this survey, my district has given about

one-third of its doctors to the Army, which, I believe, will prove to be a rather remarkable showing for a section having so few doctors in proportion to its area and population. I have found quite generally throughout this district, with very few exceptions, a commendable patriotic spirit, and an expressed desire on the part of the doctors to aid the cause of our country and to give their services wherever they may be needed.

PRESIDENT: The councilor from the 12th District will make his report:

The report of the councilor of the 12th District, Dr. D. J. Hayes, Milwaukee, was presented as follows:

Mr. President and Gentlemen: Last year we had a membership in the 12th Councilor District, composed of Milwaukee County, of three hundred and sixty-three (363) members; this year we have a membership of three hundred and sixty-eight (368), a gain of five (5) members for the year. We have had large and enthusiastic attendance, the average attendance being one hundred and ten (110) members.

The Society is improving in every way each year, and we are pulling together and as far as I can see, it is free from all factionalism.

PRESIDENT: That completes the reports of the councilors, and we shall now proceed to the next order of business, which is the report of the treasurer, Dr. Hall.

The report of the treasurer was presented by Dr. S. S. Hall, Ripon, as follows:

DR. L. M. WARFIELD, Milwaukee: I move that we dismiss the reading of the items in the treasurer's report.

Motion seconded. Motion put and carried.

TREASURER'S REPORT.

Milwaukee, Wis., October 1, 1917.

S. S. Hall, Treasurer, in account with the State Medical Society of Wisconsin.

DEBTOR.

Balance on hand October 3, 1916.....	\$5,006.38
Received from Secretary for County Dues.....	3,695.50
Total	\$8,701.88

CREDITOR.

1916	
Oct. 17—Dr. Wm. Sharpe, Expense.....	\$ 80.00
Oct. 18—Dr. Francis W. Peabody, Expense.....	85.00
Oct. 31—Appleton Volksfreund, Printing.....	60.50
Frank W. Smithers, Expense.....	10.00
Nov. 6—Wisconsin Medical Journal.....	1,500.00
Nov. 8—Wisconsin Medical Journal, Inserts.....	4.50
Nov. 16—Cannon Printing Co.....	26.00
Nov. 21—J. P. McMahon, Expense P. P. & L. Com.....	3.73
Dec. 1—Rock Sleyster, Secy., Expense.....	16.00
Schwab Stamp & Seal Co.....	1.31

Dec. 8—Appleton Volksfreund		7.00	
Dec. 30—Rock Sleyster, Expense.....		3.40	
1917			
Jan. 6—Rock Sleyster, Secy., Salary Oct. 1/16-Jan. 1/17		150.00	
H. C. Miller Co., Milwaukee, Expense, Secy.....		12.75	
Siekert & Baum Stationery Co., Expense, Secy.....		2.58	
Jan. 11—Appleton Volksfreund, Expense, Secy.....		13.50	
Jan. 16—Goodwin, McDermott & Cowan, Stenog.....		243.98	
Cannon Ptg. Co., 2,000 Reprints, Dr. Sharpe.....		43.50	
Jan. 29—Am. Assn. for Labor Leg., Com. on Health & Pub. Inst.....		15.00	
Wis. Anti-Tuberculosis Assn., Com. on Health & Pub. Inst.....		2.00	
Geo. G. Goetz, Com. on Health & Pub. Inst.....		6.63	
Feb. 1—Cannon Ptg. Co., Printing, Secretary.....		5.50	
Siekert & Baum, Catalog, Envelopes, Secretary.....		.73	
Rock Sleyster, Secy., Expense.....		18.68	
Feb. 2—S. S. Hall, a/c Salary.....		100.00	
Mch. 1—Dr. Dearholt, Univ. Club, Expense Council.....		11.25	
Siekert & Baum Stationery Co., Expense, Secy.....		4.85	
Mch. 6—H. H. West Co., Expense, Secy.....		47.50	
Mch. 12—Tanish & Co., Exp. Com. P. P. & L.....		14.00	
Mch. 30—Multigraphing Service Co., Com. P. P. & L.....		3.15	
April 2—Rock Sleyster, Secy., Salary to April 1, 1917		150.00	
Rock Sleyster, Secy., Expense.....		6.30	
April 18—Dr. L. F. Jermain.....		6.50	
May 5—Rock Sleyster, Secy., Counsel Defense.....	\$27.75		
Expense	10.80	38.55	
Wis. Anti-Tuberculosis Association—			
Com. Health & Pub. Inst.....	60.00		
Exp. Wis. Med. Journal.....	10.30	70.30	
Multigraphing Service Co., Secy., Expense.....		1.57	
May 7—Dr. Edward Quick, Com. P. P. & L.....		8.50	
May 19—Geo. G. Goetz, Com. Health & Pub. Inst.....		1.14	
Kraemer Sign Co., Com. Health & Pub. Inst.....		3.00	
June 5—Siekert & Baum Stationery Co., Expense, Secy.....		1.61	
Rock Sleyster, Expense, Council of Defense.....		13.35	
July 2—Rock Sleyster, Salary to July 1, 1917.....		150.00	
July 5—Waupun Democrat, Expense Council of Defense.....		34.50	
Dr. Edward Quick, Com. P. P. & L.....		47.58	
Tanish & Co., Com. P. P. & L.....		14.25	
July 31—S. S. Hall, Bal. Salary 1916-1917.....		100.00	
Aug. 3—Dr. H. E. Dearholt, Univ. Club, Exp. Program Com.....		7.20	
Aug. 8—Edliffsen-Leideger, Flowers.....		5.00	
Aug. 29—J. P. McMahon, Wis. Med. Journal.....		1,500.00	
Sept. 5—Dr. Edward Quick, Com. P. P. & L.....		1.54	
Multigraphing Service Co., Exp. Com. P. P. & L.....		7.95	
Wis. Anti-Tuberculosis Asso., Com. P. P. & L.....		4.08	
Siekert & Baum Stationery Co., Expense, Secy.....		1.65	
Rock Sleyster, Expense, Secy.....		14.25	
Sept. 25—Rock Sleyster, Secy., Salary to Oct. 1, 1917.....		150.00	
S. S. Hall, Postage and Incidentals.....	20.00	\$2,196.02	
Total		\$4,851.86	
Balance on Hand.....		3,850.02	
Total		\$8,701.88	

Respectfully submitted,

S. S. HALL, *Treasurer.*

TREASURER'S REPORT.

MEDICAL DEFENSE.

Milwaukee, Wisconsin, Oct. 1, 1917.

S. S. Hall, Treasurer, in account with the State Medical Society of Wisconsin.

Debtor.

1916		
Oct. 3—Balance on hand.....		\$3,665.59
Received County Dues.....		3,377.50
		<hr/>
Total		\$7,043.09

Creditor.

1916		
Oct. 16—Lines, Spooner, Ellis & Quarles.....		\$2,500.00
1917		
Jan. 18—Lines, Spooner, Ellis & Quarles.....	1,200.00	
Feb. 8—Dr. F. J. McHugh, Secy. Chippewa County Refund, G. M. Smith, S. E. Williams	4.00	\$3,704.00
		<hr/>
Total		\$3,704.00
Balance		3,339.09
		<hr/>
Total		\$7,043.09

Respectfully submitted,

S. S. HALL, *Treasurer.*

DR. S. S. HALL: I would call your attention to the fact that the Society expended a little more than its income. The receipts were \$3,695, and the expenditures \$4,851, so that our balance is smaller than it was last year. As I stated before, the probability is that the money in the treasury will be sufficient to take care of our bills for the last year, and up to date, and we will be in about the same shape as we were last year so far as that is concerned.

PRESIDENT: This report is referred to the Council?

SECRETARY SLEYSER: The Chair appoints an Auditing Committee of the members of the council.

PRESIDENT: I am informed that it is the practice of the Chair to appoint an Auditing Committee from the council, which reports back to this House of Delegates. I will appoint upon that committee Dr. Nye, Dr. Cunningham and Dr. Cairns, as Auditing Committee of the council.

DR. HALL: If that committee can take this matter up now, their report can come in to-night.

PRESIDENT: I might announce that we have rushed things through a little bit because the question as to future meetings of this House of Delegates is rather problematical, on account of the very full program of the Society. Now that we have split the meeting into general and section meetings, beginning at 9 o'clock, we shall have some difficulty, I fancy, in holding meetings

of this House of Delegates. So we have been speeding up a little more than has been the custom in the past.

DR. L. M. WARFIELD, Milwaukee: On hearing the reading of the report of the treasurer, the impression is again left in the minds of some of us, I think, as was the case last year, that there is a balance on the books. As was the case last year, we found that there was a deficit on the books. I should like to ask, if it is in order, that Dr. Hall explain in a brief manner how he figures that on the one side the Society has a deficit, and on the other side shows a balance in the Medical Defense Fund of over \$3,000. I am not a financier, and I do not quite understand that. I am led to believe that the Medical Defense fund is taking practically all of our money, or more than our money, and that we have a deficit at the end of the year.

SECRETARY SLEYSER: No, that is not true. We are just breaking even on defense.

DR. WARFIELD: Dr. Hall spoke of the fact that we would have a slight deficit, in his general report. Then he showed a surplus in the Medical Defense fund of over \$3,000. Of course there are some unpaid bills, as I understand it.

SECRETARY SLEYSER: The bills have not been paid. I think there are bills amounting to practically the sum that is in the defense fund. I think he told me that coming down on the train.

DR. WARFIELD: Would it not be interesting for the Society to know what causes the deficit?

PRESIDENT: Suppose we wait for that until Dr. Hall comes back. I see that he is out of the room at present. Then we will face him with these questions.

The next thing in order is the report of the secretary.

SECRETARY ROCK SLEYSER, Waupun, presented his report as follows:

REPORT OF THE SECRETARY FOR THE PERIOD
OF JAN. 1 to OCT. 2, 1917.

*To the House of Delegates of the State Medical Society
of Wisconsin:*

The year 1916 closed with the usual 54 component County organizations. A total number of 1,793 had paid 1916 dues on December 31. During the present year, 34 of the 1916 delinquents have been re-instated, which at this time gives a total of 1,827 who to date have paid dues for the year 1916. This is an increase of 35 over the previous year, and is the largest recorded membership of the State Medical Society.

This represents about 65% of the licensed physicians of the State, about 80% of the practicing physicians of the State, and about 95% of those who are eligible for membership. We remain the best organized of the Middle West States and rank among the three or four best organized in the Union. No State having as large a number of physicians has a greater proportion as members of its State Medical Society.

The incomplete report for this year follows. You will bear in mind that the data here presented is to October 2, only, and that three months of the year still remains, which will materially perfect conditions shown at this time. The data with which it is compared is for full years, while this is for but a nine months period. Attached is a table showing the 1916 membership complete, the 1917 membership to date, the losses or gains, the number of delinquents, the deaths, removals, and new members for each County Society and for each District in the State.

STATE MEDICAL SOCIETY OF WISCONSIN.

MEMBERSHIP REPORT.

Oct. 2, 1917.

County Society.

1st District—

Dodge	35	31	-4	2	2	0	0
Jefferson	27	30	3	0	1	1	3
Washington	14	19	5	0	0	0	4
Waukesha	46	44	-2	0	0	1	1
	<u>122</u>	<u>124</u>	<u>+2</u>	<u>2</u>	<u>3</u>	<u>2</u>	<u>8</u>

2nd District—

Kenosha	33	30	-3	4	0	0	1
Racine	40	38	-2	0	1	1	0
Walworth	28	28	0	0	1	0	1
	<u>101</u>	<u>96</u>	<u>-5</u>	<u>4</u>	<u>2</u>	<u>1</u>	<u>2</u>

3rd District—

Dane	111	108	-3	1	3	0	5
Columbia	31	29	-2	0	1	4	4
Green	19	19	0	0	0	1	1
Rock	54	57	3	2	2	0	5
Sauk	20	17	-3	2	1	0	1
	<u>235</u>	<u>230</u>	<u>-5</u>	<u>5</u>	<u>7</u>	<u>5</u>	<u>16</u>

4th District—

Crawford	8	7	-1	1	0	0	0
Grant	46	41	-5	1	2	1	0
Iowa	14	13	-1	1	0	0	0
La Fayette	18	18	0	1	1	1	3
Richland	11	15	4	0	0	0	3
	<u>97</u>	<u>94</u>	<u>-3</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>6</u>

5th District—

Calumet	13	15	2	0	0	0	2
Manitowoc	28	32	4	0	0	0	3
Ozaukee	10	10	0	0	0	0	0
Sheboygan	46	48	2	1	1	0	4
	<u>97</u>	<u>105</u>	<u>8</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>9</u>

6th District—

Brown-Kewaunee ...	40	36	-4	6	2	0	4
Door	10	13	3	0	0	0	3
Outagamie	37	37	0	1	1	0	1
Fond du Lac	58	60	2	1	1	2	6
Winnebago	67	55	-13	8	2	3	1
	<u>212</u>	<u>201</u>	<u>-12</u>	<u>16</u>	<u>6</u>	<u>5</u>	<u>15</u>

7th District—

Juneau	11	12	1	0	0	0	1
La Crosse	36	38	2	1	1	1	5
Monroe	19	20	1	0	0	0	1
Trempealeau-Jackson-Buf.	24	29	5	2	1	0	6
Vernon	17	18	1	0	2	0	3
	<u>107</u>	<u>117</u>	<u>10</u>	<u>3</u>	<u>4</u>	<u>1</u>	<u>16</u>

8th District—

Marinette-Florence..	21	22	1	0	1	0	0
Oconto	8	9	1	1	0	0	1
Shawano	21	20	-1	2	0	0	1
	<u>50</u>	<u>51</u>	<u>1</u>	<u>3</u>	<u>1</u>	<u>0</u>	<u>2</u>

9th District—

Clark	18	18	0	1	0	0	1
Green Lake-W.-A. ..	24	29	5	1	1	0	5
Lincoln	12	13	1	0	0	0	0
Marathon	34	36	2	2	1	0	5
Portage	22	23	1	0	0	0	1
Waupaca	28	29	1	0	1	0	2
Wood	25	25	0	0	1	0	1
	<u>163</u>	<u>173</u>	<u>10</u>	<u>4</u>	<u>4</u>	<u>0</u>	<u>15</u>

10th District—

Barron-P.-W.-S. B...	32	37	5	2	1	0	7
Chippewa	16	20	44	0	0	0	1
Dunn-Pepin	22	21	-1	2	0	1	2
Eau Claire	37	31	-6	6	0	1	0
Pierce	9	11	2	0	0	0	2
Rusk	9	9	0	0	0	0	0
St. Croix	21	20	-1	1	0	0	0
	146	149	3	11	1	2	12

11th District—

Ashland-B.-I.	27	25	-2	2	0	0	0
Douglas	39	41	2	0	0	0	1
Langlade	13	15	2	1	0	0	3
Oneida-F.-V.	11	16	5	2	0	0	7
Price-Taylor	12	12	0	2	0	0	2
	102	109	7	7	0	0	13

12th District—

Milwaukee	363	361	-2	24	0	7	28
	363	361	-2	24	0	7	28

Totals1795 1817 21 84 35 25 143

DIGEST OF TABLES.

8 Districts show a gain—the 1st, 2; the 5th, 8; 7th, 10; 8th, 1; 9th, 10; 10th, 3; 11th, 7; 12th, 5.

4 Districts show a loss—the 2nd, 5; 3rd, 5; 4th, 3; 6th, 12.

The 1st and 5th Districts have one delinquent, the 7th and 8th, 3; 2nd, 4th and 9th, 4; the 3rd, 5; 11th, 7; 10th, 11; 6th, 16, and the 12th, 24.

The 12th District has 27 new member, the 3rd and 7th, 18; the 6th and 9th, 15; 11th, 13; 10th, 12; 5th, 9; 1st, 8; 4th, 6, and the 2nd and 8th, 2.

29 Counties show a gain, 17 a loss and 8 are the same. The greatest gains are Monroe, Green Lake-W.-A., Barron-P.-W. S. B., Oneida-F.-V., Washington and Milwaukee with 5 each; Chippewa, Richland and Manitoweg with 4 each.

The greatest losses are Winnebago, 12; Eau Claire 6; Grant, 5; and Dodge and Brown-Kewaunee with 4 each.

24 Counties have no delinquents. The greatest number of delinquents are found as follows: Milwaukee, 24; Winnebago, 8; Brown-Kewaunee and Eau Claire, 6 each, and Kenosha, 4.

42 Counties report 143 new members, 12 Counties have reported no new members. Honors go to Milwaukee with 27, Barron-P.-W.-S. B., Rock, and Oneida-F.-V. with 7, Fond du Lac and Trempealeau-J.-B. with 6, and Dane, La Crosse, Green Lake-W.-A. and Marathon 5 each.

Total membership Dec. 31, 1914..... 1743
 Total membership Dec. 31, 1915..... 1791
 Total membership Dec. 31, 1916..... 1795
 Total membership Oct. 2, 1917..... 1817

Delinquents 1914 meeting, 93; 1915, 89; 1916, 81; 1917, 84.

Deaths and Removals 1914 meeting, 100; 1915, 58; 1916, 76; 1917, 60.

New members 1914 meeting, 157; 1915, 133; 1916, 107; 1917, 143.

An analysis of the above shows that each year, in spite of every effort of the County and State Secretaries, from 80 to 90 men fail to meet their financial obligations to the Society by the time of the State meeting. The losses to the State Society by death and removal during the past year is somewhat less than usual. The number of new members is the largest since 1914. Our membership in October exceeds by 22 our greatest total membership and three months of the year remain which will bring in still greater gains.

From the organization standpoint the condition of the Society is most satisfactory. Practically all physicians in the State who are eligible and desirable are members. Few remain outside. But for reasons which will be mentioned, it has become increasingly difficult to keep the membership up to the numerical standard we have attained, and it has only been possible through a splendid organization of County Secretaries, working faithfully to secure new members and retain all of the old. Your Secretary predicts that we have this year attained our maximum membership, and it is doubtful if we will reach the eighteen hundred mark again for many years to come.

That we are facing a shortage of physicians no one who has given thought to the subject will deny. The increased preliminary requirements for medical study, the lengthening of the course from four to seven years, the greatly increased cost of medical education, and the reduction in the number of medical colleges could have but one effect. The number of new graduates locating in the State will be less and less, while the deaths and removals will continue for a time the same. The demands of the government for medical army service is taking many Wisconsin physicians who will never return to private practice in the State. The matriculation in our medical schools during the war will be far less than in normal times, which means fewer graduates during a period when the greatest demands will be made on the profession, for we must take into consideration not only the civilian and military needs for medical service, but we must look forward to the great part our American profession must play in the reconstruction of a war devastated continent.

Taking the above into consideration, then, it is easy to understand why we may expect a falling off in membership next year and for a few years to come. This may eventually bring up a serious question of financing the Society if we are to maintain our present activities. An increase in dues will not be necessary this year, but I believe the members in attendance at this meeting should begin a campaign of education among the members on this subject. They should be made to realize that they are receiving membership in three splendid organizations, the Journal, and malpractice insurance at a ridiculously low figure; that the benefits to be derived from any organization bears a direct relation to the

amount they contribute to its support, and if we are to maintain a program of progressive accomplishment, our expenses will increase while we are facing a lessened income through a decrease in membership.

The reports of the various committees in the Hand Book mailed you, detail most of the activities of the Society during the past year. The report of the committee on Public Policy and Legislation shows a number of vicious bills introduced in the last legislature successfully opposed. The report of the publication committee shows the Journal to have been economically conducted, while you will all agree to the excellent editorial standard it has maintained in the hands of Editor Warfield. The committee on Medical Defense has continued to defend our members in time of need. Our Committee on social insurance has given a most exhaustive study to the subject and is prepared to safeguard the interests of the profession before the special investigating committee appointed by the last legislature. The committee on Health and Public Instruction has sent the Crusader to each member of the Society during the past year, has continued the distribution of public health literature, and has aided in conducting a campaign for a State-wide Annual Medical Examination Day. Two activities of the Society not mentioned in the Hand Book I wish to cover in short detail.

The first relates to Post-graduate Medical Instruction through the University of Wisconsin. You who were in the 1916 House of Delegates will recall a request from the Association of County Secretaries asking the House to take action on this subject. You will also recall a resolution passed by the House which petitioned the University to establish such a course and the appointment of a committee to present the resolution. Your committee met with the Regents of the University early in the year at Madison and succeeded in interesting them in the subject. This resulted in the incorporation in the University budget of a sum for Post-graduate medical instruction, and the legislature of 1917 passed an appropriation of \$5,000 to establish the course. The Regents of the University have organized the department as a part of the Extension Division, of which Louis E. Reber is Dean. Doctor F. C. Rinker of the Medical School of the University has been engaged on half time basis as Chief of Instruction, while the work of organization has been left to your Secretary. The scientific direction of the course has been placed in the hands of an Advisory Committee, of which C. R. Bardeen, Dean of the Medical School, is chairman; the other members being J. S. Evans, Professor of Clinical Medicine; Hoyt E. Dearholt, President of the State Medical Society, and C. A. Harper, Secretary of the State Board of Health.

Dr. Rinker is giving the first course ("Recent Advances in the Diagnosis and Treatment of Diseases of the Heart and Lungs") in the Fox Rixer Valley at the present time. Fond du Lac, Oshkosh, and Appleton were selected as the first points for the course, and the Hospitals in these cities are being used as clinical teaching centers. The course has been planned to cover three weeks of two days each—Mondays and Tuesdays of each week in Fond du Lac, Wednesdays and Thursdays in

Oshkosh, and Fridays and Saturdays in Appleton. Mornings are given over to clinics on diseases of the chest, afternoons to laboratory and X-ray demonstrations, and group instruction, evenings to lectures. A fee of five dollars is charged for the course and the student is supplied with typewritten notes and outlines. The support received in this initial course has been most gratifying, about eighty physicians having taken advantage of this first opportunity offered to do post-graduate work at home, without the losses incurred in the neglect of one's practice and the expense incident to a journey to our medical teaching centers.

If this support is continued, it will be possible to offer other courses during the year, and the department will continue to furnish one night lecturers for the County Society meetings. Dr. Rinker's course in "Recent Advances in the Diagnosis and Treatment of Diseases of the Heart and Lungs" is now available for other Counties. I will be glad to supply further information and plan courses with any of you during this meeting, or by correspondence or visit to your Society during the year. It is hoped that the organized profession of the State will give this splendid movement, instituted at the request of this Society, a support which will warrant its expansion to a point where the best medical teachers of the country may be brought to Wisconsin to do post-graduate instruction.

Early this year our country was forced into the world war and our profession was called upon to assume responsibilities which seemed at the time almost impossible to meet. The Council of National Defense at Washington appointed a Wisconsin Committee of National Defense, Medical Section, consisting of twenty Wisconsin physicians. This Committee organized with Edward Evans of La Crosse as Chairman, J. S. Evans of Madison, Vice-Chairman and your State Secretary as Secretary. A little later Governor Philipp appointed a State Council of Defense with J. S. Evans as the medical member. These two organizations have worked together to meet the medical needs of the war. A splendid working organization has been built, with a local committee on Medical Preparedness in each County Medical Society, and a medical member on each County Council of Defense. I want to discuss very briefly the situation at the beginning of the war, the needs of the government, what is expected of Wisconsin and what has been accomplished in this State.

That we may properly sense America's obligation to our allies during the war and our duty to humanity and civilization during the reconstruction period to follow, I want to briefly call your attention to the comparative supply of physicians at the beginning of the war in 1914, and ask you to remember that since this data was gathered all European countries have lost thousands of medical men and that their medical schools have been practically closed so no new men are being prepared to take their places.

SITUATION AT BEGINNING OF WAR—1914.

Enemy—

German Empire.....1 physician to 2,124 population

Allies—

France	1 physician to 1,969 population
Italy	1 physician to 1,484 population
England	1 physician to 1,537 population
Russia	1 physician to 7,865 population
United States with 140,000 physicians had...	1 physician to 691 population

This means that—

United States had 3 times as many as France per population.

2 times as many as Italy per population.

2½ times as many as England per population.

11 times as many as Russia per population.

3 times as many as Germany per population.

Wisconsin in 1915 had an estimated population of 2,473,533, and had 2,803 physicians, a population of 1 physician to every 882 population. While we believe that this is none too many and that the State faces a shortage of medical men, we will readily see that when this proportion is compared with the rest of the world, that our duty and obligation is plain.

WHAT ARE THE PRESENT NEEDS?

The Surgeon General has called for 20,000 physicians in the M. O. R. C. As there are 140,000 physicians in the United States, this means one out of seven. One out of seven in Wisconsin means one-seventh of 2,800 or 400 as our share towards supplying the present need.

WHAT HAS BEEN ACCOMPLISHED?

Your Committee has made an active canvas of the State and every physician has been supplied with information blanks. The County Committees have made a canvas of local conditions and the Councilors of the State Society are now engaged in making a survey of their Districts. Doctors G. V. I. Brown of Milwaukee and E. J. Barrett of Sheboygan, on appointment by the Surgeon General, have been examining applicants at their respective stations. It has been impossible to secure information promptly enough to keep our records accurately to date, but they show at this time 128 holding commissions in the M. O. R. C., 63 in the National Guard, 36 in the Red Cross units and something over 300 applications in but incomplete. 153 Wisconsin physicians have been called into service. The Surgeon General reports on September first 302 commissions recommended to Wisconsin men. This is a commission recommended to 10.9% of the physicians in the State. Compared with other States, we stand in 16th place but the majority of the States ranking ahead of us are small. Of the 21 States which have 2,500 or more physicians we rank in 5th place. It is the policy of your committee to guide as far as possible the apportionment of men for medical service keeping in mind a due regard for civilian needs. I wish to state here that Milwaukee and several of the other larger cities of the State have not furnished their share. We are confident, however, that when the final count is made,

Wisconsin shall have met its responsibilities and will compare favorably with any other State.

I wish to urge on you the debt of gratitude we owe the men who have volunteered for service. Provision should be made that the dependents they may leave will not want. We should in all ways safeguard their interests at home and keep intact as far as possible the practice they leave, that a resumption of same may be easy on their return. I wish to recommend that a resolution be passed by the House of Delegates providing for the payment of dues for men in the service by their County Societies and that our Journal be mailed them wherever they may be.

During the past year your Secretary has visited twelve of the component County Societies. He has been impressed almost everywhere with the improvement in these organizations, and in the fraternal feeling and scientific interest evidenced. In closing he wishes to remind the membership that our activities are not confined to an annual meeting. Our great organization is working every day in the year in the interests of its members and the betterment of mankind. The publication of our Journal, the defense of our members when in need, the safeguarding of our profession and the people against vicious legislation, the investigation and study of medico-social problems, the carrying of post-graduate instruction to the physicians' own locality, and the organization work in connection with doing our share toward winning the war and alleviating the suffering of a blood stained Europe.—these are only some of the main activities this splendid society is engaged in throughout the year. Is there a single man who can ask if membership is worth while? I wish to express my appreciation of the privilege it has been to serve you again as Secretary. Wisconsin's medical men are big men—big in every sense of the work, broad men and gifted men. To be in personal touch with you throughout the year is an experience I value above everything else, and I want to thank especially the County Secretaries, the Councilors, the officers of the Society and many other interested workers for the loyal support they have always given me, and for their unselfish devotion to the good of the cause. I ask for your advice and help in making the office of more service to our members.

Respectfully submitted,

ROCK SLEYSER, *Secretary.*

PRESIDENT: Is this the report that is to be read before the General Session?

SECRETARY SLEYSER: Yes.

PRESIDENT: It was decided last year by the House of Delegates that the general assemblage should have an opportunity to hear the secretary's report. That will probably be arranged for at the Thursday afternoon session.

The next order of business is the election of delegate and alternate to the American Medical Association to succeed Dr. T. H. Hay, Delegate, and Dr. M. R. Wilkin-

son, Alternate. Are you ready to make nominations for Delegate to the American Medical Association?

DR. H. REINEKING, Milwaukee: Who are now delegates?

PRESIDENT: Dr. H. M. Brown and the Secretary ex-officio.

DR. C. H. LEMON, Milwaukee: I nominate Dr. Brown to succeed himself.

Nomination seconded.

PRESIDENT: He is now a delegate. Also someone to succeed Dr. T. H. Hay, deceased.

DR. REINEKING: I nominate Dr. C. H. Lemon.

Nomination seconded.

PRESIDENT: Dr. Lemon has been nominated. Are there any other nominations?

DR. L. M. WARFIELD, Milwaukee: I should like to nominate Dr. Edward Evans, of La Crosse.

Nomination seconded.

DR. EDWARD EVANS, La Crosse: I want to say that I think we have been very lax in nominating men as our delegates to the national meeting. We have in nomination now a man who is known all over the country, and that is the sort of a man we want. I am not that sort of a man, and am not a candidate, and I withdraw my name.

PRESIDENT: The point made by Dr. Evans, and strongly emphasized by others, and concurred in, I think, by Dr. Brown, is that Wisconsin does not play the part it should in the meetings of the House of Delegates of the National Association. And this has been due in part to the fact—and attention has been called to this before, especially by Dr. Sarles—that we are accustomed to shifting too often. It takes a year or two for a man to break into the routine business of that body, and we no more than break a man in before we put somebody else in his place. There has also been a feeling that the men elected have not taken the election seriously enough, and have not always been present. So that is the proposition that is urged for your consideration this year.

DR. L. M. WARFIELD, Milwaukee: I will be very glad to withdraw the nomination of Dr. Edward Evans, but I leave it to the House of Delegates and to the general society if there is any man in this state of Wisconsin better fitted to represent the state of Wisconsin in the American Medical Association than Dr. Edward Evans. He may say what he pleases, and be as modest as he chooses, but the fact remains that there is not a man who has done more for the state of Wisconsin than Dr. Evans has, and it seems to me that for him to go to the American Medical Association as our delegate would honor us. We would not honor him.

DR. EVANS: I beg you, Dr. Warfield, to let me off.

PRESIDENT: Do you insist upon withdrawing your name?

DR. EVANS: Yes.

PRESIDENT: Dr. Evans insists upon withdrawing his name, which leaves the name of Dr. Lemon as the sole nominee at the present time. Are there further nominations? If not, the nominations might be declared closed.

DR. P. W. LEITZELL, Benton: I move that the nominations be declared closed.

Motion seconded.

Motion put and carried.

PRESIDENT: We will now proceed to the election. I will accept a motion that the secretary cast the ballot of the Association for the respective nominees.

Motion duly made, seconded and carried that the secretary cast the ballot of the House of Delegates for the nominees mentioned.

SECRETARY SLEYSER: The ballot has been cast.

PRESIDENT: They are declared duly elected. The next business is the election of an alternate to succeed Dr. M. R. Wilkinson, who is now in the national service.

DR. P. W. LEITZELL, Benton: Mr. Chairman, I nominate Dr. Wilson Cunningham, of Platteville.

Nomination seconded.

PRESIDENT: Dr. Cunningham has been nominated. Are there any further nominations? If not, a motion is in order that the secretary cast the ballot of the House of Delegates for Dr. Cunningham. Do I hear such a motion?

DR. H. B. SEARS, Beaver Dam: I move you that the secretary be instructed to cast the unanimous ballot of the House of Delegates for Dr. Cunningham.

Motion seconded.

Motion carried.

SECRETARY: The ballot has been cast.

PRESIDENT: The ballot has been cast and Dr. Cunningham is declared elected.

The next business in order is the election of councilors of the 1st, 2nd and 9th Districts, to succeed Dr. M. R. Wilkinson, Dr. G. Windesheim and Dr. T. H. Hay. We will take up Dr. Wilkinson's district first. Are there any nominations for councilor of the 1st District to succeed Dr. Wilkinson, whose term has expired?

DR. NOBLE, Waukesha: Mr. President, I present the name of Dr. Peters, of Oconomowoc.

PRESIDENT: Dr. Peters of Oconomowoc has been nominated. Are there further nominations?

DR. T. J. REDELINGS, Marinette: I move you that we re-elect Dr. Wilkinson to this councilorship of the 1st District.

DR. S. S. HALL, Ripon: Dr. Wilkinson is in the service.

DR. REDELINGS: Even so, I understand that he is in service, yet I would like to have my motion prevail.

DR. S. S. HALL: I do not object.

SECRETARY SLEYSER: I feel that we ought to honor Dr. Wilkinson at a time like this by re-electing him. It would show him that we appreciate the service given us in the past, and in spite of the fact that he will not be with us possibly for a year or two, it would be a vote of confidence by the Society that I am sure would be appreciated. As far as doing the actual work is concerned, it would be very easy for the House of Delegates or the president of the Society to appoint someone to attend to the work while he is in the Army.

DR. H. B. SEARS, Ripon: I would like to second the motion to re-elect Dr. Wilkinson.

DR. NOBLE: Mr. President, I supposed you required somebody who is in active practice here in the state, and that is the reason I made the nomination, and I will withdraw the name of Dr. Peters.

PRESIDENT: The nomination of Dr. Peters has been withdrawn. Does the second consent to the withdrawal? We will assume that has been done. It has been moved then that Dr. Wilkinson be re-elected. I presume that means that the secretary shall cast the ballot of the Association for Dr. Wilkinson?

DR. T. J. REDELINGS, Marinette: Yes, sir, that the secretary cast the ballot of the House of Delegates for Dr. Wilkinson.

PRESIDENT: It has been moved and seconded that the secretary cast the unanimous ballot of the House of Delegates in favor of the election of Dr. Wilkinson as councilor of the 1st District.

Motion put and unanimously carried.

DR. T. J. REDELINGS, Marinette: I now move you that the House of Delegates request Dr. Peters, of Oconomowoc, to assume the active duties of councilor during the absence of Dr. Wilkinson in the service.

Motion seconded.

PRESIDENT: It has been moved and seconded that Dr. Peters be asked to serve as councilor. Will he be called acting councilor?

DR. REDELINGS: Yes, acting councilor during the absence of Dr. Wilkinson.

PRESIDENT: Is there any discussion of the question? If not, all those in favor of this action will make manifest by saying "aye"; contrary minded "no".

Carried.

PRESIDENT: It is so ordered.

We will now proceed to the election of a councilor for the 2nd District, to succeed Dr. G. Windesheim.

DR. EDWARD KINNIE, Elkhorn: I move you, Mr. President, that the secretary be instructed to cast the ballot of the House of Delegates for the election of Dr. G. Windesheim, of Kenosha, to succeed himself.

Motion seconded.

PRESIDENT: It has been moved and seconded that the secretary cast the unanimous ballot of the House of Delegates for the election of Dr. Windesheim to succeed himself. Is there any discussion of the motion? If not, all those in favor of the motion will manifest by the usual sign; contrary-minded, no.

Motion put and carried.

PRESIDENT: The motion is carried and it is so ordered.

We will now proceed to the election of councilor for the 9th District in place of Dr. Thomas H. Hay, who is deceased. Are there any nominations?

DR. H. W. ABRAHAM, Appleton: Mr. President, I believe that Dr. Smith, of Wausau, has been acting as councilor.

SECRETARY SLEYSER: Yes.

DR. ABRAHAM: I nominate Dr. Joseph Smith, of Wausau, to succeed Dr. Hay.

Motion seconded.

PRESIDENT: Dr. Joseph Smith, of Wausau, has been nominated. Are there further nominations? If not, a motion for the election of Dr. Smith is in order.

DR. ABRAHAM: Mr. President, I move you that the secretary be instructed to cast the ballot of the House of Delegates in favor of Dr. Joseph Smith as the councilor of that district.

Motion seconded.

Motion put and carried.

PRESIDENT: The motion is carried and it is so ordered. That covers that part of the business. Now, Dr. Warfield, we can refer to the discussion of the treasurer's report.

DR. L. M. WARFIELD, Milwaukee: Mr. Chairman, I asked, just as Dr. Hall went out, why it was that on one part of his report appears a statement that the Society is not meeting its expenses, but has liabilities, and on the other side of the report shows a balance, especially in the Medical Defense fund, of \$3,000 or more. I simply ask for the benefit of the Society, to give them an idea as to why it is that we are running behind.

DR. S. S. HALL, Ripon: Perhaps I did not make myself clear. I stated that in the general fund our receipts this last year have been \$3,695.50, and that our expenditures have been \$4,851.86. We had a balance on hand at the last report, of \$5,000, so that leaves still a balance in the treasury of \$3,850.02, in the general fund. In the Medical Defense matter, at the time of the last report the bills for the preceding year had not come in, and had not been paid, and the indebtedness was paid

up. The amount paid was \$3,700. That settled all the bills that we had at that time. Now there are bills that I have just received a few days ago that have not been adjusted. We always have succeeded in getting quite a discount from the attorney, and I stated that I thought that with the amount that we had on hand we would be able to settle all indebtedness for this year up to date. Then we will have our next year's income coming in after the 1st of January, to take care of the next year. We are in no worse shape than we have been all the time.

DR. WARFIELD: I misunderstood the matter.

DR. HALL: Only we have not quite as large a balance in the treasury, because we have expended considerably more money than usual. Some of that money has been spent in paying some of the expenses of the State Defense Committee. That was agreed to. Probably that will be taken care of by the state after this. Is it now clear?

DR. WARFIELD: Yes.

PRESIDENT: Are there any further questions or discussion of the treasurer's report?

DR. J. S. KEECH, Racine: Mr. Chairman, in regard to the treasurer's report, it seems to me it would be wise that that report be made out in full, and printed, and sent with the hand book that we get previous to this annual meeting. We sit here and listen to figures read, and we do not comprehend them fully as they are being read. I know that I did not, and I can usually understand figures fairly well. I do not see why it would not be wise to let us get better acquainted with the expenditures and the various items indicating what that money is spent for, and also indicating in full up to the time of the annual meeting. I think it would be wise and advisable to have it done that way. We get the reports of various other committees, and why not have the treasurer's report treated in the same way?

DR. S. S. HALL: That report is published in the journal.

DR. KEECH: Have it before the meeting.

DR. HALL: It could not be made up to date and gotten into that book, because that has to be printed some time before the meeting. I would be very glad to have that done, but it would not be possible to make a report up to about the time of the annual meeting. This report is up to the 1st of October.

DR. KEECH: If you could not make it up to date, it would be scarcely worth while to take our time to read a partial report.

DR. HALL: I can read the items. I have several copies of the report that I am willing to distribute or let you look at them, if you desire.

DR. KEECH: I would read them at home, if I had the report before the meeting.

PRESIDENT: Are there any further questions, or any

further discussion? If not, we will pass on to the next order of business, which is the election of committees and delegates.

DR. F. T. NYE, Beloit: Perhaps I had better make my report of the Auditing Committee on Treasurer's Report, at this time.

PRESIDENT: I beg pardon. We will listen to the report of the Auditing Committee.

DR. NYE: Mr. President and Members of the House of Delegates. We, the undersigned, have examined the vouchers and accounts of treasurer S. S. Hall, and found them correct and agreeing with his report as presented. Signed, F. T. Nye, Wilson Cunningham, Rollo Cairns.

PRESIDENT: Gentlemen, you have heard the report of the Auditing Committee. What is your pleasure?

DR. E. H. TOWNSEND, New Lisbon: I move the adoption of the report.

Motion seconded.

Motion put and carried.

PRESIDENT: We shall now proceed to the election of committees and delegates. The first committee is the Committee on Public Policy and Legislation, the present members of which are Edward Quick, chairman; J. P. McMahon and L. H. Prince, Madison.

DR. H. REINEKING, Milwaukee: I move, Mr. President, that this committee be requested to serve for the ensuing year.

Motion seconded.

Motion put and carried.

PRESIDENT: The next committee to be appointed is the Committee on Medical Education, which now consist of Dr. L. F. Jermain, Milwaukee; J. Van De Erve, Milwaukee, and C. R. Bardeen of Madison.

DR. E. H. TOWNSEND, New Lisbon: Mr. Chairman and Gentlemen: I do not see how we can improve that committee. One is connected with our state medical school, and another with the medical school here in Milwaukee, and I do not see how we can have a better committee, and I would move the same be re-elected.

Motion seconded.

Motion put and unanimously carried.

PRESIDENT: The next business is the election of a delegate to the National Legislative Council, to succeed Dr. G. Windesheim, of Kenosha. Nominations are in order.

DR. H. B. SEARS, Beaver Dam: Mr. President, I move you that Dr. Windesheim be continued as such delegate.

Motion seconded.

PRESIDENT: It has been moved and seconded that Dr. Windesheim be re-elected as delegate to the National Legislative Council. Are there further nominations? This is not a nomination, it is put as a motion.

All those in favor of the motion will make manifest by the usual sign; contrary-minded, no.

Motion carried unanimously.

PRESIDENT: Dr. Windesheim is re-elected to succeed himself. The next business is the election of delegate to the Council of Medical Education, American Medical Association. Dr. Patek has requested that he be not returned, and nominations for a successor to Dr. Patek are in order.

DR. H. W. ABRAHAM, Appleton: Mr. President, I nominate Dr. T. J. Redelings, of Marinette.

Nomination seconded.

DR. T. J. REDELINGS, Marinette: Mr. Chairman, I very sincerely beg to be relieved of that duty. I think it would be very much wiser to put in some man who is closer to medical education in general than I am, and I am working entirely alone and it is very difficult for me to get away. I very much prefer not to act in that capacity. I thank you for the honor, but feel that the Society would be better served if it selected someone who is closer to medical education and in touch with medical school work. That is where this position belongs.

DR. J. S. KEECH, Racine: Mr. Chairman, I nominate Dr. Warfield, of Milwaukee.

DR. REDELINGS: I second the motion.

PRESIDENT: Are there further nominations?

DR. E. H. TOWNSEND, New Lisbon: I move that the secretary cast the ballot of the House of Delegates.

DR. H. W. ABRAHAM, Appleton: Mr. President, owing to the withdrawal or declination of my candidate to serve, I wish to withdraw my nomination.

PRESIDENT: The name of Dr. Redelings has been withdrawn.

DR. E. H. TOWNSEND, New Lisbon: I move that the secretary cast the ballot of the House of Delegates for Dr. Warfield.

Motion seconded.

PRESIDENT: It has been moved and seconded that the secretary cast the ballot of the House of Delegates for the election of Dr. Warfield as Delegate to the National Council on Medical Education. Is there any discussion? If not, all those in favor will manifest by the usual sign; contrary-minded, no.

Motion carried unanimously.

PRESIDENT: The next business in order is the election of a member of the Committee on Health and Public Instruction, to succeed Dr. W. F. Zierath, of Sheboygan. Nominations are in order.

DR. C. H. LEMON, Milwaukee: Why does he need to be succeeded?

PRESIDENT: His term has expired.

DR. E. H. TOWNSEND, New Lisbon: I nominate Dr. Spencer Beebe, of Sparta.

Nomination seconded.

PRESIDENT: Are there further nominations? If not, I declare the nominations closed, if there are no objections, and a motion for the election of Dr. Beebe is in order.

DR. EDWARD EVANS, La Crosse: Pardon me, I would like to ask a question. Would it be necessary for the House of Delegates to make an appropriation for that committee, or is it a continuing appropriation?

PRESIDENT: I do not believe it is a continuing appropriation, is it, Mr. Secretary?

SECRETARY SLEYSER: I think we have enough balance to take care of that, Dr. Evans.

PRESIDENT: There having been no further nominations I declare the nominations closed, if there are no objections. Hearing none, a motion is in order for the election of Dr. Beebe.

DR. L. M. WARFIELD, Milwaukee: I move you that the secretary cast the ballot of the House of Delegates for the election of Dr. Beebe.

Motion seconded.

Motion put and unanimously carried.

PRESIDENT: The next in order is the election of a Committee on Publication. The present members of the Committee are Dr. Patek, Chairman; Dr. Seaman, Dr. Foerster, the Secretary, and Dr. Hall, the Treasurer.

DR. E. H. TOWNSEND, New Lisbon: Mr. Chairman, will not two of those men be absent during the coming year, Dr. Seaman and Dr. Patek?

PRESIDENT: Dr. Seaman is in the service, and Dr. Patek only temporarily, probably.

DR. H. REINEKING, Milwaukee: Can the entire committee be re-elected?

SECRETARY SLEYSER: The secretary and treasurer serve ex-officio.

PRESIDENT: Dr. Patek and Dr. Seaman and Dr. Foerster are the ones elected.

DR. EDWARD QUICK, Milwaukee: I move that the Committee as it stands be re-elected.

Motion seconded.

DR. H. REINEKING, Milwaukee: I move that the secretary be instructed to cast the ballot of the House of Delegates for the Committee as at present constituted.

Motion seconded.

Motion put and unanimously carried.

PRESIDENT: The next business is the election of a Committee on Medical Defense. The Committee now consists of Dr. G. E. Seaman, Chairman; A. J. Patek,

Secretary; S. S. Hall, Treasurer. Nominations are in order.

DR. H. REINEKING, Milwaukee: It is very essential that there should be men on this committee who are familiar with the work, and I therefore move that the secretary be instructed to cast the ballot of the House of Delegates for the present members of the Committee.

Motion seconded.

PRESIDENT: I might raise the question that in this particular committee, where there are no other officers to act in place of those absent, as is the case with the Publication Committee, where the editor and managing editor may act, if it is important that these members be present to discuss individual cases or action that may come up, it may be necessary to appoint others on the committee.

DR. HALL: You mean the medical defense?

PRESIDENT: Yes.

DR. HALL: Those cases are always turned over to the attorney, and that is about all that the committee has to do, and to settle with the attorney when he brings up his bill.

PRESIDENT: The absence of one of the members indefinitely, and the other probably temporarily, would not be important?

DR. HALL: I do not think so. I think the secretary, and what there is left of the committee can take care of that matter, temporarily at least. Dr. Patek will probably be back in a month, and there will not be anything to do but settle the bills for this last year.

PRESIDENT: It has been moved and seconded that the secretary cast the ballot of the House of Delegates for the re-election of the present members of the Committee on Medical Defense. Is there any discussion? If not, all in favor of that motion will make manifest by the usual sign; contrary-minded, no.

Motion carried unanimously.

PRESIDENT: We have now reached the order of miscellaneous and new business. There is a report of the Committee on Constitution and By-Laws, Dr. G. Windeshiem, Kenosha, Chairman.

The report of the Committee on Constitution and By-Laws was presented by Dr. G. Windeshiem, Kenosha, as follows:

Mr. President and Members of the House of Delegates. Your Committee on Constitution and By-Laws, which was selected about 3 years ago, has not yet finished its work, for the simple reason that we find so many mistakes in the old constitution, places where articles have been repeated, and in fact a great mixup. Last year we had compiled all of the amendments which had been passed by the House of Delegates, and were going to have the Constitution reprinted and copies issued to

every member of the Society before this meeting. However, in looking over the final arrangement, we find that there are still a number of points which need to be changed, and which the Committee did not feel justified in changing without action of the House of Delegates. In the meantime questions have come up about new amendments that, in conformity with the recommendations of your president last year and your president this year, it might be advisable to put in the Constitution and By-Laws. In article 4 of the Constitution the Committee proposes that after the words "honorary members" the words "associate members" be inserted. This is in conformity with the recommendation your president has made, and the recommendation that your president last year has made, that such persons in the state of Wisconsin as are prominent in the so-called allied sciences, teachers of physiology, teachers of chemistry, teachers of anatomy, and other sciences allied to medicine, who are not practitioners of medicine, who do not have the degree of M. D., but still are prominent in those sciences, like professors of bacteriology, for instance, in the State University, that those people may become associate members of the State Medical Society, with the rights of other members in participating in the scientific work of the Society. In other words, that they be allowed to read papers before the Society and take part in the discussions. To that effect add to Art. 4, Section 1. of the Constitution the words "associate members" after the words "honorary members." And add to that same article, section 4, to read: "Associate members of this Society shall be selected by the council from among such persons prominent in the sciences allied to Medicine, whose names have been presented for consideration for such membership by 3 members of the Society. Such associate members shall have the right to participate in the scientific work of the Society, and their dues shall be omitted."

Now this being an amendment to the Constitution, will need to lay over for action until the next meeting of the House of Delegates, which will be to-morrow.

To Art. 5 of the Constitution should be added. Par. 3; "The Ex-Presidents of the Society." Art. 5 determines the membership of the House of Delegates, and it reads now, that the House of Delegates shall be constituted of the delegates from the various county societies, and ex-officio the officers of the Society, which means the president, secretary, treasurer and councilors. Now it is a known fact that after a man has been elected president, and has, as Dr. Sleyster expresses it, graduated from the presidency, with very few exceptions, the State Medical Society loses his services, unless he has become a councilor, or been selected by his county as a delegate; and the services of an ex-president are certainly worth more to the State Society than the services of a man who has never, or very seldom, taken much interest in the State Society. There is Dr. Reineking, for instance, and there is Dr. Bardeen, and there are a number of others who have been presidents; Dr. Pelton has been president of the State Medical Society. He could give the House of Delegates a number of pointers, and Dr. Ground is another one who could give us advice. For

that reason we should like to have that article read, "The House of Delegates shall be the legislative and business body of the Society, and shall consist, first, of delegates elected by the component county societies.

"Second, ex-officio the officers of the Society, as defined in the Constitution.

"Third, the ex-presidents of this Society."

In the Constitution, Art. 7, line 3, we recommend the omission of the word "councilor." This refers to district societies in the state. That article gives the House of Delegates the power to form councilor district societies, societies formed by the union of the county societies in a certain councilor's district. Now we have in this state district societies that do not really pertain to certain councilor districts. They have been organized because it has been found to be more advantageous to have those district societies, taking in counties of various councilor districts. So we recommend that the word "councilor" be stricken out of that line. It would then read that the House of Delegates may provide for the division of the scientific work of the Society into proper sections, and for the organization of such district societies as will promote the best interests of the profession, such societies to be composed exclusively of members of component county societies.

This simply means a correction of the work that has been done by the House of Delegates previously. The House of Delegates has voted that those district societies should be considered as district societies of the State Society, while they are not really councilor district societies.

Art. 11, line 4, we recommend that the provision for \$2 as maximum dues be changed to \$3. The dues of the members of the State Medical Society, the maximum dues, at the present time, are \$2. There is absolutely no need for such a change being made this year, but it is quite possible that before a new edition of the Constitution be printed the dues for the Society may have to be raised. Unless that is done now, the maximum fee fixed in the Constitution, the House of Delegates will not have any power at any time to raise the fees. To make a maximum fee in the Constitution at the present time of \$3, does not mean that the fee should be \$3, unless the House of Delegates at any future time wants to make it \$3. But the House of Delegates ought to have the right at any time to make the fee \$3 at least, or \$2.50, or whatever it will be without first having to amend the Constitution for that purpose.

DR. S. S. HALL, Ripon: What effect does it have then?

DR. G. WINDESHEIM: It would have no effect, only as a provision for future dues which should not exceed \$3.

SECRETARY SLEYSER: Allow the House to raise the fees without changing the Constitution.

DR. HALL: I see, but we were below that minimum now.

DR. WINDESHEIM: That the fee should not exceed \$3, in the place of \$2, as it states at the present time.

Now as far as the By-Laws are concerned, we find that Chapter 4, Section 9, and a number of other chapters and sections do not really correspond with each other. So we recommend that after the word "application" the words "and on the approval of the council" be inserted; and after the word "By-Laws," the following: "and may revoke the same for cause with sanction of the council." This relates to the issuance of charters to county societies by the House of Delegates, and the recommendation is made so that this section may correspond with section 3 of chapter 9. This practically is not what you would call an amendment; it is merely a correction of the wording.

Chapter 4, Section 10, we recommend that section 10 which provides for the organization by the House of Delegates in sparsely settled counties into hyphenated societies be eliminated entirely, as this is in conflict with section 4, Chapter 7, which provides that the organization be made by the council. You have there in your old By-Laws one section which gives the House of Delegates the right to organize county societies, and then you have another section, exactly the same wording, which gives the council the right to organize county societies. In other parts of the Constitution and By-Laws we find that the councilors are the censors, and finally the council is the judge of the membership. Now if the council is the judge of the membership, it seems that that clause where it speaks about organizing county societies ought to be left out as a duty of the council, so that it may be found responsible. This is an amendment which needs also to be laid over until the next day.

In chapter 6, section 3, we find a provision made for a bond in the sum of \$..... for the treasurer. It says the treasurer shall give bond in the sum of \$..... We are unable to find anywhere in the history of the actions of the House of Delegates, in the minutes of the House of Delegates any sum that has been put down as the bond to be given by the treasurer. Now if the treasurer knows anything about it I should like to hear from him. Dr. Hall, have you ever given any bond?

DR. S. S. HALL: Yes, when I was elected treasurer I asked Dr. Reeve, who had been the secretary and treasurer of the Society from time beyond which the memory of man runneth not, if I did not give a bond, and he says "Give a bond to yourself." So I did.

DR. WINDESHEIM: Chapter 7, section 5, line 3. This section refers to the management of the Journal, and the election of the editor by the council. We recommend the insertion of the words "through the Committee on Publication or otherwise," after the word "Society," and that the remainder of the sentence, which reads "And shall have authority to appoint an editor and such assistants as it deems necessary," be omitted, as this authority has already been given to the Committee on Publication, in Chapter 8, Section 6.

Now to explain some of these mixtures, it would be well to remember that when the State Society first accepted the Constitution and By-Laws, it was an instrument printed by the American Medical Association, but

each state society has changed and amended it to come up to the requirements of that state society, so that some of the things have never been taken off. But this Society has a Committee on Publication which is empowered to appoint or select or engage an editor and such assistants as it deems necessary; hence that power is taken out of the hands of the council, and should not appear in that section as a part of the work of the council. This also is really a correction, but it is best to lay it over until to-morrow.

Now in section 1 of chapter 8 we recommend that the line 5 be erased. Line 5 reads: "A Committee on Nominations." Under the section which provides for standing committees; the Committee on Nominations is not a standing committee, hence should not be mentioned in that place at all, and that ought to be erased. The Committee on Nomination is provided for by another part of the By-Laws.

Section 4 of Chapter 8 also lists the Committee on Nominations as a standing committee, which it is not. Its appointment and duties are provided for in Chapter 5. We recommend that Section 4 of Chapter 8 be omitted.

Now in Chapter 9, Section 3, line 2, it is advised to change the word "or" to the words "by the," which would make that section read: "Charters shall be issued upon approval of the council by the House of Delegates," in the place of "or the House of Delegates," "and shall be signed by the president and secretary of this Society. With the sanction of the Council the House of Delegates shall have authority to revoke the charter of any component society whose actions are in conflict with the letter or spirit of this Constitution and By-Laws."

That is all. I thank you.

PRESIDENT: Gentlemen, you have heard the report of the Committee. What will you do with it?

DR. E. H. TOWNSEND, New Lisbon: I move that the report be adopted.

Motion seconded.

PRESIDENT: It has been moved and seconded that the report be adopted.

DR. HALL: Does not that have to lie over until the next meeting?

PRESIDENT: Not the adoption of the report.

A motion was made to accept the report.

DR. HALL: We might accept the report. Adopting it would mean complying with its provisions.

PRESIDENT: Well, so far as that is possible. The By-Laws will be adopted to-night, will they not?

DR. T. J. REDELINGS, Marinette: No, adopted at the next meeting of the House of Delegates.

PRESIDENT: That is true of the Constitution, but may not the By-Laws be adopted at the same meeting?

DR. P. W. LEITZELL, Benton: They have to lay over until the next meeting.

PRESIDENT: You amended that to read that it be accepted?

DR. E. H. TOWNSEND, New Lisbon: That it be accepted.

Motion seconded.

PRESIDENT: A motion has been made and seconded that the report of this committee be accepted and placed on file. Is there any discussion? If not, those in favor of the motion will make manifest by the usual sign; contrary-minded, no.

Motion carried unanimously.

PRESIDENT: The motion is carried. Is there other miscellaneous or new business?

DR. H. REINEKING, Milwaukee: Does the Nominating Committee's work include the selection of a place for the next annual meeting? If not, there should be a committee appointed for that purpose.

PRESIDENT: The Nominating Committee does not select the place; it has sometimes made recommendations, but that is for the House of Delegates. Is there any other miscellaneous or new business to be brought forward at this time?

DR. R. U. CAIRNS, River Falls: Mr. President, I move you that the Nominating Committee be requested to make a recommendation of the place of meeting. I think that is usually left to the last minute, and I think that the Nominating Committee could do that as well as another committee.

PRESIDENT: It has been moved that the Nominating Committee be requested to nominate the place of meeting for next year.

Motion seconded.

PRESIDENT: The motion has been seconded. Is there any discussion? If not, are you ready for the question? All those that are in favor of the motion as made will make it manifest by the usual sign; contrary-minded, no.

Motion carried unanimously.

PRESIDENT: Is there further miscellaneous or new business?

DR. H. W. ABRAHAM, Appleton: Mr. President and Gentlemen, in the President's Address there is a recommendation to have a committee appointed to look up the medical history of the state, and I believe this is the proper time to appoint such a committee. I move that such a committee, a committee of 3, be appointed by the President, with an appropriation say of \$150 to carry on the work.

PRESIDENT: It has been moved that a Committee of 3 be appointed to carry on the work of historical research and writing, and that the sum of \$150 be appropriated toward the committee's finance. Is there a second to the motion?

DR. H. B. SEARS, Beaver Dam: Would you not have to ask the council about that appropriation?

PRESIDENT: The council has a veto power. The House of Delegates votes appropriations. It should originate in the House of Delegates.

DR. H. REINEKING, Milwaukee: I second the motion so as to get the matter before the House.

PRESIDENT: The motion of Dr. Abraham is now open for discussion.

DR. H. REINEKING, Milwaukee: For one I would like to ask for information as to what it is proposed to do. Perhaps the president can enlighten us.

PRESIDENT: I have no very clearly defined ideas. I made the recommendation because I felt very much that something should be done, and that it must not be postponed longer. We have repeatedly had our attention called to the fact that some of our older physicians, who were then veritable gold mines of information upon the early history of Wisconsin medicine, were getting old, and were passing away. I have considered the death of a few of these during the past two or three years, and it has seemed to me very regrettable that something was not done to get what data might have been obtained from these men. I feel very positive that work of this sort cannot be carried very far by voluntary help of busy men, engrossed with other things, because there is an extraordinary amount of labor involved. Dr. William Snow Miller of the University has some wonderful data, I believe. Dr. George Barth a few years ago had some very fine data and card indexes on various men and their histories. You are all probably familiar with the very fine piece of work that was done by Dr. Louis Frank on the history of Milwaukee County. Anyone who has had a chance to go over that must wish for a similarly good record of the other sections of the state. I know, furthermore, that the curator of the State Historical Society is very much interested. You will remember that he had a little exhibit at the Madison meeting. It is possible that we might interest the Society in appropriating or providing some way for the carrying on of this research. Possibly we could get a research fellow at the University of Wisconsin, some Fellow who is going after his Master's or Doctor's degree, to make this the subject of his thesis. And feeling the way I did, I had in mind the possibility that this Committee might be able to induce the stockholders of the old Wisconsin Medical Journal Company, who have still some undivided funds on hand, undivided because there has been a feeling on the part of most of those men that they did not want that money themselves, but wanted to leave some permanent memorial of that Company. The sum is only about \$500. Several proposals have been made, but possibly, as I say, this Committee might be able to make such a good presentation to the stockholders that they would be very glad to turn that fund over for such a purpose as that. I hoped particularly to see a committee appointed which would have the interest and power to negotiate in the name of the Society with other people on the outside.

DR. WILSON CUNNINGHAM, Platteville: Mr. Secretary, I move that the President be made one of that committee.

DR. P. W. LEITZELL, Benton: I will second that motion.

Motion put and carried.

DR. H. REINEKING, Milwaukee: There is still a motion before the House, on the appointment of a committee, and the appropriation.

PRESIDENT: Is there any further discussion of this subject?

DR. P. W. LEITZELL, Benton: Are we to understand that the idea is to start a library, or just to get a record of files and data? Is it just to be peddled from one meeting to another, or is it to have some place like our state library, to have the reports in, or is it to be reported to the different members of the Society through the Journal, or otherwise.

PRESIDENT: I would feel that it would not be worth a great deal until it was in some published form, and I should like to see it put into a very readable form.

DR. P. W. LEITZELL, Benton: Would it not be well to empower this committee to put it in good form? I for one would subscribe for it, and I think the members of the Society would all subscribe for it if it contained early data—and not too early at that, a few years ago—what we are doing and getting at at the present day, and having it distributed to the Society in a little booklet is a mighty good thing for the Society.

PRESIDENT: You would probably want to leave this pretty much to the discretion of the committee, would you not?

DR. LEITZELL: That is the idea, to the discretion of the Committee. I just wanted information on it. Is this supposed to be a collection of biographies of the different physicians through the state, and of the societies that existed, and the like of that?

PRESIDENT: Well, I have not had very clearly in mind just what. I think that would evidently be a part of it, because history is after all, a record of the doings of people.

DR. LARSEN, Colfax: Why would it not be a good idea to have a committee consisting of, say 3, and then a sub-committee consisting of one man from each county, to write up the county. He will be in better position and condition to bring the individual data to the notice of the other committee, and it would not cost us so much. I know that up in our county we have had quite a number of old physicians, and they are passing away, and if we do not get the matter started soon they will all be dead and leave no evidence. So I would suggest that we do the work as soon as possible and in that way.

PRESIDENT: Is there any further discussion of the subject?

DR. L. M. WARFIELD, Milwaukee: Mr. Chairman and Gentlemen. If this committee is going to be purely an advisory committee, to attempt to lay lines, so to speak, for further development, what is the necessity of giving that committee \$150?

DR. C. H. LEMON, Milwaukee: Postage.

PRESIDENT: The suggestion would be there, I should say, Dr. Warfield, that if that committee is going very far it will probably have to hire a clerk, and \$150 will not go very far even at that. Is there any further discussion?

(Calls for the question.)

PRESIDENT: The question has been called for. The motion is made, in substance, that a committee of 3 be appointed by the Chair, and the sum of \$150 be appropriated to such committee for the purpose of carrying on historical research in Wisconsin medicine, making some sort of record, devising plans, etc. Those in favor of the motion will manifest by the usual sign; contrary-minded, no.

Motion put and unanimously carried.

PRESIDENT: Is there further business?

DR. H. REINEKING, Milwaukee: The Address of the President included some other recommendations, one in regard to canvassing the Medical Defense proposition. Is it desirable to take any action on that subject, or is it to be left to the medical defense committee?

PRESIDENT: In making the recommendation I had in mind a separate committee. This committee has been administering the fund, and it has been rather too closely connected, perhaps, to have the best perspective, and it would seem to me best to have an outside committee, not in any wise an investigating committee, except in the broadest and best sense of the word. It should take a broad survey of the whole field, and secure the advice and counsel of the existing committee, take into consideration all of the factors, and bring in a comprehensive report at the next meeting, that would be the best method. I purposely did not wish to bring the subject up for discussion, because it is one that we could easily spend four or five hours upon, as I think we have done in past years of general discussion, without getting very far. I feel that it is a matter that requires very careful and studious work. I recommend the appointment of an outside committee. There is no motion before the House.

DR. D. J. HAYES, Milwaukee: I move that we adjourn.

DR. L. M. WARFIELD, Milwaukee: There is one question that comes up in that connection, a recommendation made by our Committee on Public Policy and Legislation, and a recommendation which has been made by former committees on public policy and legislation, that we are constantly being led into a great deal of difficulty and are constantly having to do an excessive amount of

work in a very short time during the period when the Legislature is in session, due to the fact that we have no individual there who is watching our interests constantly. Now it seems to me that the delegates should very seriously consider the proposition as to whether or not the money that has been spent for medical defense might not be better, and with more profit to the Society as a whole, spent for a paid lobbyist; and I think that when this committee is constituted, which I trust it will be, that is, the committee to which you had reference, to investigate this whole question of medical defense, that this matter will reach a very definite head. We must do something in the matter either at this meeting or certainly at the next meeting. Our State Society should take more action, and should broaden out into more lines than it has heretofore done. We are hampered by the lack of funds. As Dr. Sleyster has said, it will either come to a question of raising the dues, or to a question of cutting off some of the activities that we might feel had better be cut off, and putting that money into other activities that the Society thinks better for the general good of the Society. I simply bring this matter up at this time because I feel that it is exceedingly important, and it is a matter that needs careful consideration, and one upon which action must be taken before the meeting of the next state legislature.

DR. H. REINEKING, Milwaukee: Mr. Chairman and Gentlemen. It has become apparent this evening that there is a feeling, on the part of several of the members at least, that the advisability of the continuance of the medical defense is a matter about which there is some doubt. I would, therefore, move you that in accordance with the recommendation of the President a committee be appointed to take into consideration, during the coming year, this matter of medical defense, and to report at the next annual meeting, such committee to be appointed by the President at his leisure.

Motion seconded.

PRESIDENT: It has been moved and seconded that a committee be appointed to take up the subject of medical defense. Would you give them the power of extending their consideration to the recommendation of Dr. Warfield?

DR. H. REINEKING, Milwaukee: I think that is a separate matter, and should be kept separate. This committee should concern itself simply with the matter of medical defense. It has been said this evening that the surgeons receive the greater part of the benefit of the defense. The surgeons as a general thing carry enough insurance to take care of themselves; the other men who have large incomes, are more vitally concerned. They are paying for the defense now, are paying willingly. The other matter of having a paid lobbyist should not be included in the work of this committee.

PRESIDENT: Is there further discussion of this motion?

(Calls for the question.)

PRESIDENT: The question has been called for. All those in favor of the motion will make manifest by the usual sign; contrary-minded, no.

Motion carried unanimously.

PRESIDENT: Is there further business?

DR. EDWARD EVANS, La Crosse: Mr. Chairman and Gentlemen. As chairman of the Medical Section of the State Council of Defense, I should like to bring to the attention of the delegates a matter that will have to come before us probably before very long, although the matter is not yet ripe for any action. A great many of our men have gone to the front, gone to the camps, given up their practice, and there ought to be some means devised, and there will undoubtedly be some means devised with relation to this matter, but I simply want to bring it to your attention now, so that if it comes later you will have thought about it and be prepared to act on it. Many of those men are giving up their practice and many of them, if they are kept away until the end of the war, and the war lasts two or three years, will not be able to support their families properly, and will not be able to keep up their insurance, nor to pay their dues to this Society, and so on; and, while no definite scheme has been devised as yet, at the Clinical Congress of Surgeons the latter part of this month the matter is to be brought up, and perhaps some feasible plan for taking care of those who will need care, will be brought forward. and I should like to enlist your sympathetic interest in this matter when it is brought up. And for that purpose only I wanted to mention the matter at this time, Mr. President.

PRESIDENT: It has been suggested by the secretary that in view of the sections opening to-morrow morning at 9 o'clock that it will be well nigh impossible to have a successful meeting of the House of Delegates before that time, and that we adjourn to meet after the close of the afternoon general session.

DR. H. REINEKING, Milwaukee: Where?

PRESIDENT: I should say in one of the section rooms at the Auditorium. There are small section rooms there, and the place of meeting could perhaps be announced. The rooms are close by, and we will have a sign, or something of that sort up where it can be seen, stating the arrangements. If it is agreeable we will adjourn until to-morrow immediately after the meeting of the general session, in one of the section rooms.

DR. NYE has raised a question as to when the Nominating Committee should meet. Inasmuch as that committee has not organized, it might be well to appoint a time now. The Nominating Committee can draw off into one corner and effect their own organization.

DR. D. J. HAYES, Milwaukee: I move that we adjourn.

Motion seconded.

Motion put and carried.

MEETING OF THE HOUSE OF DELEGATES OCTOBER 3, 1917, 5:45 P. M., AT THE AUDITORIUM.

Meeting called to order by the President.

PRESIDENT: We will listen to the reading of the minutes of the last meeting.

(Minutes read.)

PRESIDENT: You have heard the minutes. If there are no corrections or objections they will stand approved. Hearing none, it is so ordered.

We are now under the order of miscellaneous and new business.

I might take occasion at this time to announce the membership of the committees I was directed to appoint last night.

For the Committee on Historical Research in the Society I have the following appointments to make:

Dr. T. J. Redelings, Marinette.

Dr. H. M. Brown, Milwaukee.

Dr. S. S. Hall, Ripon.

Dr. C. R. Bardeen, Madison.

And, according to the directions of the House of Delegates last night, myself.

For the Committee on Liability Insurance I make the following appointments:

Dr. L. F. Jermain, Milwaukee.

Dr. H. A. Gilbert, Madison.

Dr. Joseph Smith, Wausau.

Dr. F. F. Knauf, Kiel; and possibly one other member will be added to this committee later on. Those four are appointed, and whether it will be deemed advisable to increase the number to five will be determined after further consideration. Is there any miscellaneous or new business to be presented to this meeting?

DR. EDWARD EVANS, La Crosse: Mr. Chairman and Gentlemen. Not because they may need it, but as a mark of appreciation of their patriotic service to the country, I should like to move that the fees of all men in active service be paid by the County Medical Society from which they have gone, and that the Journal be sent to them wherever they may be.

Motion seconded.

PRESIDENT: You have heard the motion, that the dues of members in military service be paid by the County Society, and that the Journal be sent to them wherever they may be. Is there any discussion?

(Calls for the question.)

DR. WILSON CUNNINGHAM, Platteville: Should that matter be taken up by each county society? It could be recommended to the county, but could we force the county to pay the dues of members in active military service?

PRESIDENT: I presume it should be only a recommendation. We cannot enforce it.

DR. EDWARD EVANS: If it came officially from the central body there would be very few who would oppose it.

PRESIDENT: One would think there would be very little ground for objection. In any event, I do not think there will be any objection.

DR. CUNNINGHAM: I do not think there will be any at all.

DR. H. W. ABRAHAM, Appleton: Why do you not make it the State Society, and take out the dues, instead of the County Society. Then we have the authority to do it.

SECRETARY SLEYSER: It would cut down our income too much, Dr. Abraham. We cannot afford that cut in our income.

DR. R. U. CAIRNS, River Falls: I think the counties ought to pay it. Let the state do it if they have to. It will not come up.

PRESIDENT: Is there further discussion? If not, the question has been called for, and all those in favor of this motion will make manifest by the usual sign; contrary-minded, no.

Motion carried unanimously.

PRESIDENT: The motion is carried. We will now hear from Dr. Windesheim's Committee on Constitution and By-Laws.

DR. G. WINDESHEIM, Kenosha: Mr. Chairman and Members of the House of Delegates. I read these proposed amendments and changes in the Constitution and By-Laws last night, and if there are any of the members that did not hear them last night I might read them again, otherwise I do not think it would be necessary to do that.

PRESIDENT: Probably all have heard them. Are there any members that wish to hear the proposed amendments and changes read? If not, we can perhaps adopt them on the reading of last night, by recollection of what they were.

DR. C. H. LEMON, Milwaukee: Adopt them as read last night.

PRESIDENT: Is that a motion?

DR. LEMON: I make that as a motion.

Motion seconded.

Motion put and unanimously carried.

PRESIDENT: Is there any further business?

DR. EDWARD EVANS, La Crosse: I should like to ask a question: Perhaps by extending the privilege last night to the Nominating Committee, that committee was given the right of choosing the place of next meeting. I heard that this afternoon. I have been off for six months, and I intended before coming down here, to consult with my conferees to determine whether they would

be in favor of having the meeting at La Crosse next year, and I wondered if it would be possible for the Nominating Committee to not designate a place of meeting for next year, but to wait until I got home and see if it would be possible for us to invite the Society to La Crosse next year. The matter will go to everyone through the Journal anyway.

DR. G. WINDESHEIM, Kenosha: Mr. President, unless the Nominating Committee was specifically instructed to select the place of meeting last night, it is not in their province to do so.

PRESIDENT: They were asked to do so by resolution last night. That was, however, to nominate a place. It has seemed to me in past years, with some of the mix-ups there have been, that it would be wise to leave the selection of the meeting place in the hands of the executive officers and the Program Committee, because conditions may arise to call for a change. In one instance after the House of Delegates had chosen the city it was utterly and absolutely impossible to find hotel accommodations to take care of such a large body, and a change had to be made by more or less extra-legal measures. I would gladly entertain a motion that this matter be left, perhaps to the Council, or the administrative officers, or some such matter as that, unless it is clearly indicated where we should go.

DR. C. H. LEMON, Milwaukee: Mr. Chairman and Gentlemen. In view of the fact that last evening it was impossible to find anyone who was willing to assume the responsibility of inviting the Society to any particular city next year, I move you that the question of place of meeting next year be left to the executive officers of the Society. The burden of opinion last night was that we ought to come back to Milwaukee, because there was no other place to go. But in view of what Dr. Evans has said, I think it is likely that some other place than Milwaukee may be chosen, if the matter is left to them to decide. So I think the question of place of meeting should be left to the executive officers.

Motion seconded.

PRESIDENT: You have heard the motion that the determination of the place of meeting will be left in the hands of the executive officers. Is there any discussion of this question? If not, those in favor of the motion as made and seconded will make manifest by the usual sign; contrary-minded, no.

Motion carried unanimously.

PRESIDENT: Is there further new or miscellaneous business?

DR. C. H. LEMON, Milwaukee: Mr. Chairman, does the Committee on Nominations report to this body or to the general body?

PRESIDENT: To the House of Delegates to-morrow.

DR. LEMON: The report is ready.

SECRETARY SLEYSER: It is not due until to-morrow. The constitution provides that it shall be handed in on Thursday.

PRESIDENT: It will be well before a motion to adjourn is made, to discuss the question as to when and where the next meeting of the House of Delegates shall take place.

DR. EDWARD EVANS, La Crosse: Meet directly after the general session, as we did this evening. That is the most convenient time. A great many of the people present have luncheon engagements, and that sort of thing.

SECRETARY SLEYSER: There will not be anything but perhaps this one piece of business, and it will only take a few minutes for to-morrow's session.

PRESIDENT: It is probably safe then when we do adjourn to take an adjournment until 8:55 to-morrow morning.

Is there further business to be brought before this session?

DR. SPIEGELBERG, Boscobel: I should like to suggest that the matter of compensation for members of our Society who are now in the medical service in the Army, and the matter of devising some proper means of compensation for these men, has not been definitely settled, and it might be well to take some means of having this body, or the State Society, send to the different societies some word in regard to the matter. Possibly a committee could be appointed to study the subject carefully and report at some future time. It would probably be impossible to come to a definite conclusion during the next two or three days.

DR. EDWARD EVANS, La Crosse: The Medical Section of the Council of Defense had the matter under consideration yesterday, and, as the Doctor says, in view of there being so many conflicting opinions, and in view of the fact that the Congress of Surgeons will meet in Chicago the latter part of this month to consider the question, we thought it best to wait until some concrete definite plan, which would be feasible, could be prepared.

DR. H. W. ABRAHAM, Appleton: Mr. President, I move that we adjourn.

Motion seconded.

Motion put and carried.

Adjournment to 8:55 A. M., Oct. 4, 1917. Auditorium.

SESSION OF THE HOUSE OF DELEGATES,
OCTOBER 4, 1917.
8:55 A. M.

Meeting called to order by the President.

The minutes of the previous meeting were read.

PRESIDENT: If there are no objections the minutes will stand approved as read. Hearing none, it is so ordered.

The first regular business this morning is the report of the Nominating Committee, Dr. Lemon, Chairman.

DR. C. H. LEMON, Milwaukee: Mr. President and Gentlemen. The Committee on Nominations convened Oct. 3rd, 1917, at 11 P. M., and on organization elected Dr. Lemon, of Milwaukee, Chairman. The Committee made the following nominations:

President: Dr. G. Windesheim, Kenosha, Wis.

1st Vice-President: Dr. Oscar Lotz, Milwaukee, Wis.

2nd Vice-President: Dr. T. W. Nuzum, Janesville, Wis.

3rd Vice-President: Dr. Carl Doege, Marshfield, Wis.
I move the adoption of the report.

Motion seconded.

DR. G. WINDESHEIM, Kenosha: There is no question but that I highly appreciate the honor of recommendation made by the Nominating Committee, but I think that in the present times a different man, a younger man, a man with more energy and better physical abilities than I have, should be selected to take care of the State Medical Society for the ensuing year. The House of Delegates has the right, always, to make additional nominations, and for the benefit of the State Medical Society I believe that the House of Delegates ought to exercise that right now and make another nomination for the presidency of the State Medical Society.

DR. H. B. SEARS, Beaver Dam: You have been taking care of it for a number of years.

DR. EDWARD EVANS, La Crosse: That is the first time I have ever heard you talk foolishly.

DR. S. S. HALL, Ripon: Your remarks are unconstitutional.

SECRETARY SLEYSER: He is out of order.

(Calls for the question.)

PRESIDENT: You have heard the report, Gentlemen. It has been moved and seconded that the report be adopted. All those in favor will manifest it by the usual sign.

Motion unanimously carried.

DR. G. WINDESHEIM, Kenosha: Gentlemen, I meant just exactly what I said, and I warn you that probably the services of the President the coming year will not be what they have been in the past. The idea of me filling the shoes of such men as Drs. Dearholt, Jermain, Redelings, Charlie Sheldon, and so on, is preposterous. But the honor conferred upon me by the Society has made my head big enough so that I may fill their hats. (Laughter and applause.)

PRESIDENT: We are now under the order of new and unfinished business. Has any member any business to bring before the House?

DR. DE NEVEU, Wycena: I hardly know whether it is proper to bring the subject up before the House of Dele-

gates or not, but there is a matter that I would like to hear an expression of opinion on, and that is in regard to the services of the physicians in the state assisting examining hoards. I believe it would look much better if the Government did not offer a ten cent fee to physicians for examining men for the selective draft, and simply applied to the patriotic duty of the men in the state or in the United States to make those examinations as a patriotic duty, and not offer them an insignificance. I know that a great many of the men in Columbia County, where I reside, all of them in fact, are willing to serve, but feel that they would rather serve without the idea of a ten cent fee than to have that mentioned in any contract or understanding. I do not know how others feel about it.

DR. J. S. PEMBER, Janesville: Where did you get that information, doctor?

DR. DE NEVEU, Wyocena: I happen to be on the board myself.

DR. PEMBER: Is it official information?

DR. DE NEVEU: That is official, ten cents a man is offered and the physicians feel that a ten cent fee does not comport with the dignity of the profession nor with the service required.

DR. PEMBER: I am also on the board, and I understood that they paid them \$4 a day.

DR. DE NEVEU: The hoard members, but not the examining physicians.

DR. PEMBER: I do not think any such information has reached our Board.

DR. DE NEVEU: That is the law, I am positive of that. Ten cents a man is allowed for examination. It would be a good thing if that was struck out, and let the men make the examinations for nothing.

DR. R. U. CAIRNS, River Falls: Is that 3 for a quarter?

DR. DE NEVEU: It might be. I think they would have better service if the men felt that they were doing the work for nothing as a patriotic duty. We want the best service possible in that work, and I know it is slighted in some cases.

DR. L. H. PELTON, Waupaca: Mr. President and Gentlemen. If we physicians have got to a point where a tip will be accepted, I would offer a resolution that we positively refuse to make the examination for the 10c fee, and do the work gratis.

Motion seconded.

PRESIDENT: Gentlemen, you have heard the resolution of Dr. Pelton that the Society go on record as refusing to accept any such fee, and that in lieu of fees it is the opinion of the Society that we shall do the work gratis. Is there any discussion?

DR. G. WINDESHEIM, Kenosha: Mr. President, the custom is that the physician has the privilege of refusing or turning back the fees he has received, or even refusing these fees if he sees fit to do so. Now a fee of 10c is certainly not sufficient to pay the physician. However, in some instances it is sufficient to pay the expenses of the physician. I know of one case in our county where a physician 24 miles away from the county seat, came for several days to examine men in the draft. One day he made \$1.50, and another day I think he made a dollar, and so on. Now that pays him for the gasoline, if he has a cheap running car. Some of the physicians in the city have declined to take any fee at all, because they were under no expense, only their time, and they arranged it among themselves so that it was not hard on them. If this Society goes on record to refuse the fee of 10c it means that those men who count on that 10c to pay part of their expenses will not be allowed upon their honor to take that 10c or that \$1.00 or \$1.50, whatever it may be. While personally I have refused to take any fees for examinations made because they consumed only a little time, I do not believe it is fair to some of the country practitioners, who have to travel quite a distance, to put them under obligations to refuse the fee if they see fit to accept it.

PRESIDENT: Is there further discussion of this matter?

DR. D. J. HAYES, Milwaukee: I can see absolutely no use in passing this resolution. I do not believe that the interest of the Society would be benefited thereby.

DR. T. J. REDELINGS: I agree with Dr. Hayes, that this is a matter which will ultimately resolve itself into an equation which we must work out individually. The medical profession is overdoing in its efforts to serve humanity. We simply throw our talent away, giving it so freely that it has come to be worthless. I am not at all in favor of the resolution. Neither am I in favor of serving the Government free, notwithstanding that I have done and am now doing just exactly what Dr. Windsheim has outlined. I have examined man after man with just a gracious how and with an "It's all right." I expect to continue to do this until our Government recognizes the value of our work and makes legal provision to pay the physician adequately for his talent as it now pays the merchant and manufacturer for his merchandise and his product. Efficiency and honest service on the part of our profession is indispensable to the success of our Government in her war endeavors. The physician should be compensated for his time and skill and not be placed on a pay-roll on the same basis as a layman, who is filling a clerical position of minor importance.

PRESIDENT: Is there further discussion of the question? If not, are you ready for the question? You all understand the motion. Those in favor of it as stated will make manifest by the usual sign; contrary-minded, no.

(Vote taken.)

PRESIDENT: The noes appear to have it. The motion is lost.

Is there any further business to be brought before the Society? If not, a motion to adjourn is in order.

DR. D. J. HAYES, Milwaukee: I move that we adjourn to 8:45 to-morrow.

Motion seconded.

Motion put and carried.

SESSION OF THE HOUSE OF DELEGATES, OCTOBER 5, 1917, 8:45 A. M., AUDITORIUM.

Meeting called to order by the President.

Minutes of the last meeting read.

PRESIDENT: You have heard the minutes. If there are no corrections or objections they will stand approved as read. Hearing no objection, they are so approved.

We are now under the order of new and unfinished business.

SECRETARY SLEYSER: Mr. President, Dr. Becker is here and wishes to present a resolution to the House of Delegates.

DR. W. F. BECKER, Milwaukee: Mr. President and Gentlemen. I would like to bring up the matter of laying the foundation for organizing a state society for Mental Hygiene under the auspices of the National Committee for Mental Hygiene. Although a subject which interests social workers it is fundamentally a medical matter and I felt it should have its inception and endorsement here.

The National Committee of Mental Hygiene which now has organizations in many states, is dedicated to the better understanding and care of the insane, feeble-minded and delinquent, to preventive work in these fields and comprehensively to the conservation of mental efficiency. It has the support of leading psychiatrists, psychologists, educators and philanthropists and is so efficient in stimulating and bringing together all the activity in these fields in practical results as to command respect and enthusiasm. Our state should at once come into the movement and I shall be glad to answer any questions and would like to present the following resolution:

Resolved, That the Wisconsin State Medical Society endorse the movement to establish a State Society for Mental Hygiene, under the auspices of the National Committee for Mental Hygiene.

DR. KINNIE, Elkhorn: What is the scope of their work?

DR. BECKER: It is so large I can only mention some of it. I had a paper setting out in extenso the subject, which was too late for the program and which you were thus spared. It encourages intensive study and treatment of insanity; the establishment of psychopathic hos-

pitals which patients may enter for treatment of mental disorders as they now go to general hospitals for physical disorders (the Phipps Psychopathic Hospital, that model institution at Johns Hopkins, owes its existence largely to the early propaganda of the Society).

Recognizing the dictum that insane hospitals should be responsible for the mental health of their communities, it fosters establishment of the mental clinics now in operation in towns in the hospital districts of New York and elsewhere. There are probably now a dozen mental clinics in various fields of psychiatry in New York City.

It develops *after care* of the insane discharged from hospitals, adjusting them to the outer environment with conserving "follow up" care. It helps occupational therapy. It seeks transfer to hospital care of the many insane still kept in jails and almshouses, especially in the Southern states. I recently visited the insane in some of these jails of the south, and the situation which I cannot here take time to tell, is appalling.

The handling of the neuro-psychiatric work connected with the war is engaging their activities very largely at present.

It is interested in the approximately half a million feeble-minded in the country who are alarmingly reproducing themselves and for whom there is very inadequate provision; also in the delinquency in which feeble-mindedness is the principal factor or at least a very large and fundamental one. To this end surveys are made by the Society, mental examination of school children encouraged; also mental clinics established in juvenile and municipal courts and in prisons. The New York City Police Department, for example, has now a psychopathic laboratory with five psychiatrists, a psychologist for mental testing, and two social workers, where every felon arrested in the Manhattan district is examined and every misdemeanor in the lower East Side. Penal problems being largely psychiatric, this is the only way to solve them.

The Society also engages in publicity and educational propaganda by teaching by exhibits and by publications and lectures and inspections. Also engages in special studies and acts as an information bureau throughout the states.

I cannot begin to enumerate the various activities. But we should be a part of this fine program for our own needs and organize a state unit under the auspices of the National Committee. There are sixteen states now so organized. Wisconsin should be the seventeenth.

PRESIDENT: Gentlemen, you have heard the resolution. Is there further discussion?

I should like personally to endorse the suggestion of Dr. Becker, and to say that I believe that questions of this sort which are primarily medical questions and problems which are primarily medical should emanate from the medical profession, and the machinery for correcting them should grow out of the medical profession. As a medical man closely associated with sociologists and social workers in various health fields, I have been personally very much ashamed at times, and very much

put out at other times, by the fact that very frequently our sociological associates seem to be very much quicker on the trigger, and have a very much better perspective sometimes than we medical men do, and it always irritates me to think that these men should initiate what really pertains to our field. And if we hang back, of course they deserve the credit for doing so. I always like to see the medical men take the leadership and hold it in those problems that are essentially socio-medical problems.

Is there any further discussion? If not, Gentlemen, what will you do with the resolution?

DR. S. S. HALL, Ripon: I move the adoption of the resolution.

Motion seconded.

Motion put and unanimously carried.

PRESIDENT: The motion is carried. Is there further business.

SECRETARY SLEYSER: Mr. President, I feel that before this meeting adjourns a committee should be appointed in the State Medical Society to take up the question of War Relief. It may not be necessary just now, but it will be a year before we have another meeting, and I think the responsibility of it should be placed in the hands of someone, so that no matter what may come up we will be prepared to meet the situation. It is not an easy matter to lay out a plan of relief, and it will not be an easy matter to meet the problems that are going to come up. It will require some study and some time on the part of some group of men, and they ought to be ready for it. I think before this House of Delegates adjourns a committee should be appointed who will be entrusted with this work. I therefore move that the president be authorized to appoint a committee of 3 to take charge of the subject of war relief, and the problems that may come up in the coming year in connection with that subject.

DR. T. J. REDELINGS, Marinette: I second the motion.

PRESIDENT: It has been moved and seconded that the Chair appoint a Committee of 3 on the subject of War Relief as it applies to the medical profession, of course?

SECRETARY SLEYSER: Yes.

PRESIDENT: Are there any remarks? If not, those in favor of the motion will make manifest by the usual sign; contrary-minded, no.

Motion carried unanimously.

PRESIDENT: The motion is carried. Is there further business to be brought before the House of Delegates?

I will appoint as the committee on the subject of War Relief, Dr. Edward Evans, who is Chairman of the Wisconsin Committee of the National Council of Defense, Dr. A. W. Gray, Milwaukee, and Dr. Rock Sleyser, Waupun, as acting secretary.

On motion duly seconded and carried the House of Delegates adjourned sine die.

One of the best opportunities of conserving ammonia is made available by the substitution of natural ice for the manufactured product. This substitution is being provided for throughout the country, and it is expected that a very large percentage of the ice used next summer will be ice that the Food Administration is encouraging people to harvest now from rivers and ponds wherever possible.

A serious obstruction in the way of this splendid opportunity of providing an urgently needed chemical for our Army and Navy is caused by the fact that several large cities have restrictions against the use of natural ice.

It is obvious that municipalities should not permit the use of polluted ice. There is much misapprehension and prejudice concerning the use of natural ice that careful consideration and study will dispel. To any Boards of Health, etc., interested in this subject, the Food Administration will be glad to send any of the following booklets (published by Natural Ice Association of America, 18 East 41st St., New York City):

Status of Scientific Opinion of the Purity of Natural Ice.

The Effect of Handling and Storage on the Safety and Purity of Ice.

Non-Relation of Natural Ice to Typhoid Fever and Dysentery.

The Purity of Natural Ice.

The Bacteriology of Ice.

The Sanitary-Chemical and Bacteriological Examination of Natural Ice.

Melted Natural Ice Compared with Bottled Spring Water for Drinking.

The Study of the Purity of Natural Ice from Polluted Water.

Melted Natural Ice vs. Bottled Spring or Distilled Water for Drinking.

Bacteria in Natural Ice.

Natural Ice and the Public Health.

Factors of Sanitary Safety in a Natural Ice Supply.

Water from Melted Natural Ice for Domestic Use.

The camel is a well known animal, called by the Chaldeans, Cyboi, by the Greeks, Iphim. If the blood of it is placed upon the head, in the skin of a newt, the stars shining at the time, then he that uses it shall seem like a giant, and that his head is in the stars. And this is said in the book Alcorath, by Hermes. And similarly if anyone eats of this, he shall at once be bereft of his senses. And if lights made mixed with this blood, are illuminated, then shall it be seen that all men standing about, have heads like camels, but only if there be no light from other candles—*Albertus Magnus*.

If anyone shall carry the heart of a dog, in his left pocket, then shall the dogs all about be dumb.—*Albertus Magnus. De Mirabilibus Mundi*.

LIST OF MEMBERS OF THE STATE MEDICAL SOCIETY OF WISCONSIN, 1917

- Abaly, W. C., Madison.
 Abbott, LeRoy, Outaric.
 Abell, E. C., La Crosse.
 Abelman, T. C. H., Watertown.
 Abraham, H. W., Appleton.
 Ackerly, A. W., Milwaukee.
 Ackerman, Wm., Milwaukee.
 Ackley, S. B., Oconomowoc.
 Adams, Geo. F., Kenosha.
 Adams, J. C., Superior.
 Addleman, I. M., Wausau.
 Ainsworth, H. H., Richland Center.
 Albers, H. H., Allenton.
 Alcorn, D. N., Stevens Point.
 Alderson, J. C., Wausau.
 Aldrich, L. I., Black Earth.
 Aldridge, H. W., Manitowoc.
 Alexander, Geo. L., Milwaukee.
 Alexander, Sara W., Hudson.
 Alexander, W. S., Oakfield.
 Allen, C. F., Middleton.
 Allen, Jessie P., Beloit.
 Allen, L. P., Oshkosh.
 Allen, Wm. E., Sun Prairie.
 Allen, Wm. J., Beloit.
 Allison, Elizabeth, Madison.
 Altman, Maurice, Milwaukee.
 Amundson, A. C., Cambridge.
 Amundson, Karl K., Cambridge.
 Amunson, Phillip B., Mondovi.
 Anderson, Carl M., Wild Rose.
 Anderson, Harold B., Beloit.
 Anderson, Jens, Racine.
 Audrae, R. W., Plainfield.
 Andre, F. E., Kenosha.
 Andrew, G. F., La Crosse.
 Andrews, C. W., Waupaca.
 Andrews, Malcom P., Beloit.
 Andrews, Niel, Jr., Oshkosh.
 Andrus, A. P., Ashland.
 Antoine, F. J., Prairie du Chien.
 Aplin, F. W., Waukesha.
 Armbruster, B. F., Milwaukee.
 Armstrong, C. A., Prairie du Chien.
 Armstrong, C. E., Oconto.
 Armstrong, L. G., Boscobel.
 Arnold, F. W., Milwaukee.
 Arveson, R. G., Frederic.
 Ashley, T. W., Kenosha.
 Ashum, David W., Eau Claire.
 Aubin, Jos. N., Peshtigo.
 Aus, J. L. N., Deer Park.
 Axley, A. A., Butternut.
 Axtell, E. E., Marinette.
 Axtell, Luella E., Marinette.
 Aylward, Richard C., Madison.
 Baasen, J. M., Mt Calvary.
 Babcock, Frank, Haugen.
 Babcock, I. G., Cumberland.
 Bach, J. A., Milwaukee.
 Bachhuber, A. E., Mayville.
 Bachhuber, L. M., Mayville.
 Baer, A. N., Milwaukee.
 Baer, C. A., Milwaukee.
 Bailey, Mark A., Fennimore.
 Balr, Francis M., Lake Mills.
 Balrd, John, Superior.
 Balrd, J. C., Eau Claire.
 Baker, Geo. R., Tomahawk.
 Baker, John H., Bryant.
 Baker, Julian C., Hawkins.
 Baker, W. F., Birnamwood.
 Baldwin, F. H., Bloomington.
 Baldwin, Geo. E., Green Lake.
 Balkwill, C. A., Crafton.
 Baneroff, H. V., Blue Mounds.
 Banks, W. H., Windom, Minn.
 Bannen, W. E., La Crosse.
 Barher, J., Marathon.
 Bardeen, C. R., Madison.
 Barnes, E. C., Ripon.
 Barnes, H. T., Pewaukee.
 Barnes, J. S., Milwaukee.
 Barnette, J. R., Jr., Neenah.
 Barnstein, Chas., Timothy.
 Barnstein, J. E., Manitowoc.
 Barret, Edward J., Sheboygan.
 Barth, G. P., Milwaukee.
 Bartran, W. H., Green Bay.
 Batchelet, C. W., Plne River.
 Batchelder, Gertrude, Madison.
 Batchelor, W. A., Milwaukee.
 Bath, D. H., Oshkosh.
 Batty, A. J., Portage.
 Bauch, Chas. W., Milwaukee.
 Bauer, K. T., Milwaukee.
 Baum, E. L., Milwaukee.
 Baur, Emil F., Milwaukee.
 Bayer, W. H., Gleason.
 Bear, W. G., Monroe.
 Beachmaun, C. R., La Crosse.
 Beck, A. A., Coloma.
 Becker, B. A., Silver Lake.
 Becker, W. F., Milwaukee.
 Bedford, Edgar, Sheboygan.
 Beebe, C. M., Sparta.
 Beebe, C. S., Milwaukee.
 Beebe, L. W., Superior.
 Beebe, P. A., Glenwood City.
 Beebe, S. D., Sparta.
 Beech, Geo. D., Adams.
 Beeson, H. B., Cornell.
 Beffel, John M., Milwaukee.
 Befer, Aug. L., Chippewa Falls.
 Belitz, Alfred, Monroe, Utah.
 Belitz, Wm., Cochrane.
 Bell, A. R., Tomah.
 Bellack, B. F., Columbus.
 Bellin, Jos. J., Green Bay.
 Bellin, Julius J., Green Bay.
 Bellis, G. L., Wauwatosa.
 Belting, G. W., Oxfordville.
 Bendixeu, B. O., Kewaskum.
 Bennett, Louis J., Ft. Atkinson.
 Bennett, W. C., Rhineland.
 Benson, G. H., Richland Center.
 Bentzein, E. W., Milwaukee.
 Berger, A. J., New Holstein.
 Berglund, S. A., Marinette.
 Beringer, L., Plymouth.
 Bernhard, A., Milwaukee.
 Bernstein, M. A., Kenosha.
 Bertrand, Jos. Il., De Forest.
 Betz, J. C., Boscobel.
 Beutler, W. F., Wauwatosa.
 Beyer, Hart, Pittsville.
 Biekel, Edwin F., Oshkosh.
 Bill, B. J., Geona Junction.
 Bilstad, G. E., Cambridge.
 Binnewies, Frank C., Janesville.
 Blinnie, Helen A., Poynette.
 Binnie, John., Poynette.
 Bird, H. R., Madison.
 Bird, M. D., Marinette.
 Birkle, J. A., Milwaukee.
 *Birbeck, S., Gratiot.
 Black, Nelson M., Milwaukee.
 Blackburn, F. E., Cassville.
 Blair, J. C., Hazel Green.
 Blanton, Smiley, Randall's Island, N. Y.
 Blekking, J. H., Sheboygan Falls.
 Blewitt, M. T., Markesan.
 Blumenthal, R. W., Milwaukee.
 Blumer, Edward, Monticello.
 Boek, O. B., Sheboygan.
 Bodden, A. M., Milwaukee.
 Boeckman, Frank A., Greenwood.
 Boerner, R. W., Milwaukee.
 Bolton, E. L., Chilton.
 Booher, J. S., Richland Center.
 Boorse, L., Milwaukee.
 Boothby, E. L., Hammond.
 Borehardt, A. C., New London.
 Borden, Frank R., Plainfield.
 Boren, J. W., Marinette.
 Bornstein, Max, Milwaukee.
 Bossard, C., Richfield.
 Bossard, M., Spring Green.
 *Bothwell, D. F., Pardeeville.
 Bowen, Chas. F., Richland Center.
 Bowen, F. W., Watertown.
 Bowen, H. P., Johnson Creek.
 Bowers, J. T., Lake City, Minn.
 Boyce, S. R., Madison.
 Boyd, C. D., Kaukauna.
 Boyd, G. T., Fond du Lac.
 Boyer, E. R., Rhineland.
 Boynton, R. D., Grand Marsh.
 Bradbury, E. L., Nellsville.
 Bradford, J. A. L., La Crosse.
 Bradford, E. B., Hudson.
 Bradley, H. E., Milwaukee.
 Brady, D. L., Cuha City.
 Braun, Otto, Ashland.
 Breckenridge, H. E., Racine.
 Breed, A. L., Rock Elm.
 Brehm, H. J., Racine.
 Brehm, Theodore, Racine.
 Brey, P. F., Milwaukee.
 Briggs, S. J., Madison.
 Broache, A. H., Oshkosh.
 Brockway, Frank, Oshkosh.
 Broghammer, F. J., Superior.
 Brook, J. J., Milwaukee.
 Brooks, E. H., Appleton.
 Brooks, Lester M., Mendota.
 Brown, A. D., Mineral Point.
 Brown, A. L., Wausau.
 Brown, Edw. B., Beloit.
 Brown, Frank E., Milwaukee.
 Brown, G. V. L., Milwaukee.
 Brown, H. M., Milwaukee.
 Brown, I. M., New London.
 Brown, J. F., Sparta.
 Brown, R. C., Milwaukee.
 Brueckbauer, Geo., Plymouth.
 Brueckbauer, H. G., Sheboygan.
 Bruess, Julius, Milwaukee.
 Brunbaugh, E. V., Milwaukee.
 Brunckhorst, F. O., Kewaunee.
 Bryant, J. R., Wausau.
 Buchan, S. C., Racine.
 Buchanau, R. C., Green Bay.
 Buck, G. C., Platteville.
 Buckley, T. J., Briggsville.
 Buckley, Wm. E., Hartford.
 Buckmaster, S. B., Janesville.
 Buehler, J. W., Prairie du Sac.
 Bugher, C. E., Ladysmith.
 Buutiug, C. H., Madison.
 Burdon, R. M., Green Bay.
 Burgess, A. J., Milwaukee.
 Burkhart, E. W., Menomonee Falls.
 Burns, J. W., Soudan, Minn.
 Burton, J. J., Milwaukee.
 Busse, A. A., Jefferson.
 Butler, E. F., Mosinee.
 Butler, F. E., Menomonie.
 Cady, M. P., Birnamwood.
 Caffrey, A. J., Milwaukee.
 Cahana, Stephen, Milwaukee.
 Cahoon, Roger, Baraboo.
 Cain, C. L., Elmwood.
 Cairns, Rollo, River Falls.
 Caldwell, Henry C., St. Croix Falls.
 Caldwell, Margaret, Waukesha.
 Calkins, H. J., Shawano.
 Callahan, J. L., La Crosse.
 Calvey, P. J., Fond du Lac.
 Campbell, Lorne A., Clear Lake.
 Campbell, W. B., Menomonee Falls.
 Cannon, C. R., Ellsworth.
 Cantwell, W. H., Shawano.
 Caples, B. M., Waukesha.
 Carhill, N. W., Milwaukee.
 Carhart, G. A., Milwaukee.
 Carmichael, C. S., Helenville.
 *Carnachan, Geo. M., Bruce.
 Carroll, Jos. H., Milwaukee.
 Carter, R. M., Green Bay.
 Carthaus, A. H. C., Thiensville.
 Cary, E. C., Reedsville.
 Cary, L. W., Winnebago.
 Casey, Merle, Almond.
 Cassels, G. S., Pt. Washington.
 Cassidy, W. W., Durand.
 Caswell, H. O., Ft. Atkinson.
 Caughey, C. R., Kenosha.
 Cavanaugh, T. E., Milwaukee.
 Caveney, Jas. J., Milwaukee.
 Chandler, Fremont E., Waupaca.
 Chandler, Jos., Pardeeville.
 Chaney, Eng., Wauwatosa.
 Chapman, F. M., Milwaukee.
 Charbonneau, E., Superior.
 Charles, C. H., White Lake.
 Chilson, Benj., Beloit.
 Chloupek, C. J., Green Bay.
 Chorlog, J. K., Madison.
 Christensen, C., La Crosse.
 Christensen, Emil, Two Rivers.
 Christensen, F. C., Racine.
 Christenson, J. W., Sparta.
 Christian, E. F., La Crosse.
 Christiansen, Geo., Galesville.
 Christofferson, A. J., Poysippi.
 Christofferson, H. H., Colby.
 Christofferson, P. J., Waupaca.
 Churchill, B. P., Milwaukee.

- Clark, Burton, Oshkosh.
 Clark, F. T., Waupun.
 Clark, M. H., Ripon.
 Clark, R. B., Monroe.
 Clark, W. T., Ft. Atkinson.
 Clarke, F. B., Billings, Mont.
 Clarke, T. C., Oconto.
 Clason, J. A., Fond du Lac.
 Clawson, H. E., Red Granite.
 Cleary, B. L., Edgerton.
 Cleary, J. H., Kenosha.
 Clemeut, W. J., Berlin.
 Coerper, E. E., Fredonia.
 Coffey, Chas. J., Milwaukee.
 Cohn, A. H., Milwaukee.
 Coleman, H. M., Barron.
 Collins, D. B., Madison.
 Collins, W. P., Racine.
 Combacker, H. E., Osceola.
 Combacker, Leon C., Osceola.
 Combs, C. J., Oshkosh.
 Comee, Wm., Seymour.
 Conkey, C. D., Superior.
 Conklin, Geo. H., Superior.
 Conley, J. M., Oshkosh.
 Connell, D. R., Beloit.
 Connell, F. G., Oshkosh.
 Conroy, J. M., Nopeming, Minn.
 Cook, C. S., Evansville.
 Cook, E. H., Watertown.
 Cook, F. S., Eau Claire.
 Cooksey, R. T., Madison.
 Coon, Geo. E., Milton Junction.
 Coon, J. W., Stevens Point.
 Cooney, Ed., Appleton.
 Cooper, C. A., Norwalk.
 Copeland, Ernst, Milwaukee.
 Corbett, J. F., Alhambra, Cal.
 Corbett, M. E., Oshkosh.
 Cornwall, W. B., Turtle Lake.
 Corr, A. B., Juneau.
 Corr, J. T., Racine.
 Cottingham, M. D., Lake Geneva.
 Couch, E. E., Milwaukee.
 Cowan, W. F., Stevens Point.
 Cox, A. J., Superior.
 Crane, M. C., Osseo.
 Creasy, L. E., South Wayne.
 Cremer, C. H., Tomah.
 Christman, E. S., Alma.
 Crockett, W. W., Beloit.
 Crommett, H. B., Amery.
 Cron, C. O., Camp Douglas.
 Crone, Virgil D., Manitowoc.
 Cronyn, W. J., Milwaukee.
 Crosby, E. P., Arnott.
 Crosby, Geo. W., Sheboygan.
 Crowe, N. F., Walworth.
 Cummings, J. H., Superior.
 Cunningham, J. N., Stanly.
 Cunningham, R. B., Cadotte.
 Cunningham, Wilson, Platteville.
 Curless, Grant W., Walworth.
 Currens, J. R., Two Rivers.
 Currier, P. M., Milwaukee.
 Curtin, A. L., Milwaukee.
 Curtin, J. J., Sawyer.
 Cutler, J. S., Wauwatosa.
 Cutter, J. D., Tomanawk.
 Dahl, L. A., Menomonie.
 Dana, A. C., Fond du Lac.
 Danforth, Q. H., Omro.
 Daniels, L. J., Milwaukee.
 Daniels, W. N., Mosinee.
 Darby, G. S., Brodhead.
 Darling, Farl, Milwaukee.
 Darling, F. E., Milwaukee.
 Darling, Walt G., Milwaukee.
 Darling, W. H., Minneapolis, Minn.
 Davelaar, G. W., Milwaukee.
 Davies, R. E., Waukesha.
 Davis, F. A., Madison.
 Dawley, G. T., New London.
 Dawson, C. A., River Falls.
 Dawson, D. W., Rice Lake.
 Dean, James P., Madison.
 Dean, Jos., Madison.
 Dearholt, H. E., Milwaukee.
 DeBesch, J. A., Milwaukee.
 DeBoth, E. R., Green Bay.
 Decker, C. O., Crandon.
 Decker, H. J., Milwaukee.
 DeCook, J. L., Angelica.
 DeColbert, M. M., New Lisbon.
 Diecher, H. F., Plymouth.
 Delaney, H. O., Beloit.
 DeLap, R. H., Richland Center.
 Del Marcelle, C. C., Neenah.
 DeNeveu, A. C., Wycena.
 Denham, J. F., Downsville.
 Dennis, J. F., Waterloo.
 Derge, H. F., Eau Claire.
 Dernehl, P. H., Milwaukee.
 Devine, C. B., Marshall.
 DeVoe, C. A., Berlin.
 DeWane, J. C., Ossette, Mont.
 Dewey, R. E., Wauwatosa.
 DeWire, M. V., Sharon.
 Dickenson, G. H., Milwaukee.
 Dietrich, Paul H., Detroit, Mich.
 Dill, Geo. M., Prescott.
 Dillmau, A. E., Steuben.
 Dodd, J. M., Ashland.
 Doege, K. W., Marshfield.
 Doern, W. G., Milwaukee.
 Dohearty, F. P., Appleton.
 Dohearty, W. H., Peshtigo.
 Domann, W. G., New Butler.
 Donaldson, G. P., Shiocton.
 Donnell, J. E., Cuba City.
 Donnelly, F. J., Monches.
 Douohue, E. J., Antigo.
 Donohue, M. J., Antigo.
 Donohue, W. E., Manitowoc.
 Donovan, J., Milwaukee.
 Donovan, J. P., Madison.
 Doolittle, J. C., Lancaster.
 Doolittle, S. W., Lancaster.
 Dorpart, Louis, Rhinelander.
 Dongherty, C. F., Richland Center.
 Donghty, P. H., Brnnett.
 Doyle, J. H., Little Chute.
 Doyle, J. N., Neshkora.
 Drake, F. I., Mendota.
 Draper, M. H., Deerfield.
 Drey, R. J., Auburndale.
 Drexel, A., Milwaukee.
 Dreyer, R. A., Wheeler.
 Dries, Jos., Milwaukee.
 Driessel, H., Kewaskum.
 Driessel, S. J., Bartou.
 Drissen, W. H., Pt. Washington.
 Dube, F. de S., Centuria.
 Duclos, A. A., Kilbourn.
 Du Frenne, M. F., Madison.
 Dnnn, E. A. A., Platteville.
 Durner, U. J., Milwaukee.
 Durr, W. E., Milwaukee.
 Dusenbury, Geo. E., Amherst.
 Dwight, C. G., Madison.
 Eames, H. F., Egg Harbor.
 Eck, G. E., Lake Mills.
 Echols, C. M., Milwaukee.
 Edwards, A. C., Arcadia.
 Edwards, H. J., Ripon.
 Edwards, W. A., La Crosse.
 Egan, G. J., La Crosse.
 Egdahl, A., Menomonie.
 Eglund, G. R., Sturgeon Bay.
 Ehmer, J. W., Neosha.
 Eickelberg, F. A., Reesville.
 Eidam, W. L., La Crosse.
 Ekblad, V. E., Superior.
 Elfers, Jos. C., Sheboygan.
 Ellenson, E. P., Chippewa Falls.
 Elliott, E. S., Fox Lake.
 Elliott, J. T., Rhinelander.
 Elliott, R. S., Laona.
 Ellis, W. E., Dunbar.
 Ellis, W. H., Barron.
 Elmergreen, R., Milwaukee.
 Elsom, J. C., Madison.
 Elvis, E. B., Medford.
 English, J. E., Baraboo.
 Engsberg, W. A., Lake Mills.
 Ennis, S. A. J., Shullsburg.
 Epley, O. H., New Richmond.
 Erdman, C. H., Stanley.
 Erickson, H. C., Stanley.
 Ernst, G. R., Milwaukee.
 Evans, C. A., Milwaukee.
 Evans, E., La Crosse.
 Evans, E. P., South Milwaukee.
 Evans, Jno. M., Evansville.
 Evans, J. S., Madison.
 Evans, N. C., Mt. Horeb.
 Evans, Oweu, Bangor.
 Evert, F. T., Retreat.
 Faber, C. A., Milwaukee.
 Fairfield, W. E., Green Bay.
 Falge, Louis, Manitowoc.
 Falk, V. S., Stoughtou.
 Farnsworth, A. L., Baraboo.
 Farnsworth, Frank B., Janesville.
 Farr, J. F., Eau Claire.
 Farrell, A. M., Two Rivers.
 Fazen, L. E., Racine.
 Fechter, F. J., Elkhart Lake.
 Federman, E. H., Montello.
 Federspiel, M. M., Milwaukee.
 Fellman, G. H., Milwaukee.
 Felt, P. R., Waukesha.
 Felter, Edw., Plymouth.
 Fenelon, Chas. D., Phillips.
 Festerling, E. G., Reedsville.
 Fickes, H. C., Owen.
 Fidler, C. A., Milwaukee.
 Fiebiger, Geo. J., Waterloo.
 Fiedler, O. A., Sheboygan.
 Field, F. T., Elroy.
 Fifield, Geo. W., Janesville.
 Finney, W. H., Clintonville.
 Fischer, B. B., Wild Rose.
 Fitzgerald, J. J., Eagle.
 Fitzgerald, R. E., Milwaukee.
 Fitzgibbon, W., Milwaukee.
 Fitzpatrick, M. L., Milwaukee.
 Flanagan, G. J., Kaukauna.
 Flatley, M. A., Antigo.
 Fleek, J. L., Brodhead.
 Fleming, E. E., Wausau.
 Fletcher, E. A., Milwaukee.
 Fletcher, F. E., Asnand.
 Fletcher, Wm., Salem.
 Fleury, F. D., Omro.
 Flynn, L. H., Eau Claire.
 Flynn, R. E., La Crosse.
 Foot, J. S., Ripon.
 Foerster, O. H., Milwaukee.
 Foley, F. P., Dorchester.
 Folsom, W. H., Fond du Lac.
 Force, O. O., Pardeeville.
 Ford, W. B., Milwaukee.
 Forkin, G. E., Menasha.
 Forsythe, J. S., Sharon.
 Fortier, C. A. H., Milwaukee.
 Fortner, W. H., Princeton.
 Fosse, B. O., Beloit.
 Foster, A. M., Kaukauna.
 Foster, J. H. A., Cornell.
 Fowle, F. F., Wauwatosa.
 Fowle, I. H., Milwaukee.
 Fowler, J. H., Lancaster.
 Fowzer, L. R., Manawa.
 Fox, G. W., Milwaukee.
 Fox, Paul A., Beloit.
 Fox, Phillip, Madison.
 Fox, Phil. A., Milwaukee.
 Fox, P. R., Madison.
 Fox, Wm. E., Milwaukee.
 France, J. J., Milwaukee.
 Francois, S. J., New Glarus.
 Frank, J. H., Neillsville.
 Frank, J. H., Milwaukee.
 Frank, L. F., Milwaukee.
 Frankel, A. H., Milwaukee.
 Franklin, I., Sheboygan.
 Franzel, J. E., Howards Grove.
 Frawley, R. M., Wausau.
 *French, S. W., Milwaukee.
 Freudenberg, J. A., Markesan.
 Frew, J. W., Milwaukee.
 Frey, F. H., Wausan.
 Frey, P. G., Washburn.
 Frick, Lewis, Athens.
 Friedrich, R. O., Milwaukee.
 Friend, L. J., Merrill.
 Froelich, J. A., Princeton.
 Froggatt, W. E. L., Cross Plains.
 Frost, Carrie A., Almond.
 Fucik, E. J., Williams Bay.
 Fullner, Louis, Milwaukee.
 Fuller, C. O., Stratford.
 Fuller, M. H., Bonduel.
 Fulton, W. A., Burlington.
 Furstman, J. M., La Crosse.
 Gaenslen, F. J., Milwaukee.
 Gallogly, M. J., Milwaukee.
 Galloway, A. D., Clayton.
 Ganser, W. J., Madison.
 Gates, A. J., Tigerton.
 Gates, Eugene, Two Rivers.
 Gault, John A., Lancaster.
 Gaunt, P. F., Oconto.
 Gauvreau, E. T., Superior.
 Gavin, S. E., Fond du Lac.
 Geisen, C. W., Superior.
 Gendron, A. E., River Falls.
 Genter, A. E., Sheboygan.
 Gephart, C. H., Kenosha.
 Gerend, A., Cato.

- Gibbs, G. L., Marshall.
 Gifford, H. B., Juda.
 Gilbert, H. A., Madison.
 Gilchrist, R. T., Milwaukee.
 Gill, J. F., Madison.
 Gilles, A. S., Waukesha.
 Gillespie, W. W., Milwaukee.
 Gillette, H. E., Packerwaukee.
 Glasier, M. B., Bloomington.
 Gleason, C. M., Manitowoc.
 Guagl, W. B., Monroe.
 Gohar, G. G., Muscoda.
 Goddard, J. B., Eau Claire.
 Godfrey, Jos., Lancaster.
 Godfrey, Rush, Lancaster.
 Goerkemann, W. H., Rochester, Minn.
 Goetsch, O. F., Hustisford.
 Goggins, G. F., Wrightstown.
 Goggins, J. W., Catunetville.
 Goggins, R. J., Oconto Falls.
 Golley, F. B., Milwaukee.
 Goodfellow, J. R., Superior.
 Gordon, J. B., Shawano.
 Gordon, John S., Milwaukee.
 Gorst, Chas., Madison.
 Gosin, D. F., Green Bay.
 Gotham, L. E., Sawyer.
 Gough, C. R., Wausau.
 Gould, C. M., River Falls.
 Gramling, H. J., Milwaukee.
 Gramling, J. J., Hales Corners.
 Graner, L. H., Pound.
 Grannis, I. V., Menomonie.
 Gratiot, C. C., Shullsburg.
 Gratiot, Wm. M., Mineral Point.
 Graves, L. S., Wilton.
 Gray, A. W., Milwaukee.
 Gray, R. H., La Crosse.
 Greeley, H. P., Waukesha.
 Green, M. K., Mendota.
 Green, Wm. A., Wausau.
 Greenberg, H., Milwaukee.
 Greenwood, S. D., Neenah.
 Gregory, A. T., Elroy.
 Gregory, D. H., De Pere.
 Gregory, Frank, Valders.
 Gregory, W. W., Stevens Point.
 Grinde, G. A., Cumherland.
 Griswold, C. M., Alma Center.
 Griswold, F. C., Mazomaie.
 Groh, A. R. P., Milwaukee.
 Grosskopf, E. C., Milwaukee.
 Grotjan, Wm. F., Milwaukee.
 Ground, Wm. E., Superior.
 Grove, Wm. E., Milwaukee.
 Groves, R. D., Lodi.
 Gunderson, A., La Crosse.
 Gunderson, C. A. S., Madison.
 Gunther, Emil, Sheboygan.
 Gunther, Otto, Sheboygan.
 Gunther, T. J., Sheboygan.
 Gunther, Wm. H., Sheboygan.
 Gutsch, Otto J., Sheboygan.
 Guttman, Paul, Kellnersville.
 Guy, J. E., Milwaukee.
 Gysi, John, Big Falls.
 Habbege, C. J., Watertown.
 Hackett, J. H., Milwaukee.
 Hadley, D. A., Oconomowoc.
 Hageman, F. H., Milwaukee.
 Haight, A. L., Chrystal Falls, Mich.
 Hall, C. H., Madison.
 Hall, S. S., Ripon.
 Hallock, W. E., Juneau.
 Halsey, H. A., Hiles.
 Halsey, R. C., Lake Geneva.
 Hambley, T. J., Hurley.
 Hamilton, B. B., Ridgeway.
 Hammond, F. W., Manitowoc.
 Hankwitz, P. G., Milwaukee.
 Hanley, Wm. J., Kenosha.
 Hannum, H. H., Bayfield.
 Hansen, John, Glenbeulah.
 Hanson, John W., Milwaukee.
 Harbert, Helen, Kenosha.
 Hardgrove, J. H., Eden.
 Hardy, C. P., Milwaukee.
 Hargarten, L. J., Milwaukee.
 Harkins, J. P., Forest Jct.
 Harlow, G. A., Milwaukee.
 Harper, C. A., Madison.
 Harrington, T. L., Milwaukee.
 Harris, F. M., Fond du Lac.
 Harter, A. F., Marathon.
 Hartford, W. P., Duquque, Iowa.
 Harvey, J. R., Footville.
 Harvie, W. D., Oshkosh.
 Haskell, M. W., Richland Center.
 Hastings, J. F., Kenosha.
 Hatch, W. E., Superior.
 Haubrick, H. J., Oshkosh.
 Hauberry, J. S., Wonewoc.
 Hauberry, P. H., Hillshoro.
 Haushalter, H. P., Milwaukee.
 Hausmann, N. E., Kewaskum.
 Haueu, W. S., Racine.
 *Hay, Thos. H., Stevens Point.
 Hayden, A., Shullsburg.
 Hayes, C. A., Chippewa Falls.
 Hayes, D. J., Milwaukee.
 Hayes, E. P., Eau Claire.
 Hayes, E. S., Eau Claire.
 Hayman, C. S., Boscobel.
 Hayman, L. H., Boscobel.
 Hayward, J. C., Marshfield.
 Head, L. R., Madison.
 Hebron, R. A., Cataract.
 Hecker, Wm., Beloit.
 Heeb, H. J., Milwaukee.
 Heffron, J. J., Milwaukee.
 Hefty, C. A., New Glarus.
 Hegner, G. T., Appleton.
 Heidner, A. H., West Bend.
 Heidner, G. A., West Bend.
 Heim, R. R., Marinette.
 Heising, A. F., Menomonie.
 Helgeson, E. J., New Glarus.
 Helland, J. W., Viroqua.
 Helm, Arthur C., Beloit.
 Helm, E. C., Beloit.
 Helm, H. M., Beloit.
 Helz, J. W., Fond du Lac.
 Henderson, M. L., Milwaukee.
 Hendrickson, H., Green Bay.
 Henika, G. W., Madison.
 Hennicy, C. W., Portage.
 Hennig, E. L., Beloit.
 Heraty, J. A., Milwaukee.
 Heraty, J. E., Bloomington.
 Hering, E. R., Shell Lake.
 Herner, W. L., Milwaukee.
 Herrick, E. L., Kenosha.
 Herron, A. L., Milwaukee.
 Hertzman, C. O., Ashland.
 Hervey, J. A., Milwaukee.
 Hess, C. F., Madison.
 Hess, J. W., Adell.
 Hickey, Robt. E., Winchester.
 Hicks, L. W., Burlington.
 Hidershide, G. N., Arcadia.
 Higgins, E. G., Melrose.
 Higgins, S. G., Milwaukee.
 Higgs, H. J., Crivitz.
 Hilger, Wm. F., Milwaukee.
 Hill, W. B., Milwaukee.
 Hilton, G. F., Sturgeon Bay.
 Hinckley, H. G., Merrill.
 Hines, L. L., Rockbridge.
 Hinn, L. P., Fond du Lac.
 Hinrichsen, J. A., Larsen.
 Hipke, G. A., Milwaukee.
 Hipke, Wm., Marshfield.
 Hirschboeck, J. G., Forestville.
 Hitz, H. B., Milwaukee.
 Hodges, F. L., Monroe.
 Hodgson, A. J., Waukesha.
 Hoermann, R. B., Milwaukee.
 Hoffman, E. E., Lone Rock.
 Hoffman, J. G., Hartford.
 Hoffman, P. A., Campbellsport.
 Hoffmier, L. A., Superior.
 Hogan, J. H., Racine.
 Hogan, J. M., Oshkosh.
 Hogue, G. I., Milwaukee.
 Holbrook, A. T., Milwaukee.
 Hollenbeck, N. W., Milwaukee.
 Holliday, Marion E., Oshkosh.
 Holm, J. H., Kenosha.
 Holtz, H. M., Beaver Dam.
 Holz, A. P., Seymour.
 Hopkins, W. B., Cumberland.
 Hopkinson, D., Milwaukee.
 Horsewell, U. M., Wausaukee.
 Hosmer, M. S., Ashland.
 Houck, Mary P., La Crosse.
 Hougou, E., Grand Rapids.
 Hough, A. G., Madison.
 Housley, H. W., Chill.
 Howde, A. G., Superior.
 Howell, E. C., Fenimore.
 Howison, N. L., Menomonie.
 Hoyer, A. A., Randolph.
 Hoyer, G. C., Milwaukee.
 Hoyt, G. E., Menomonie Falls.
 Hubenthal, J. C., Belmont.
 Huennkens, Jos. H., Milwaukee.
 Huff, F. C., Sturgeon Bay.
 Hughes, C. W., Winoconne.
 Hughes, J. R., Dodgeville.
 Hull, Edw. S., Milton Jct.
 Hummel, W. J., Ablemaus.
 Hunt, E. A., Oshkosh.
 Hunt, F. O., Fall River.
 Hurd, H. H., Chippewa Falls.
 Hurth, O. J., Cedarburg.
 Hyde, W. G., Milwaukee.
 Hyslop, F. R., Delavan.
 Irvine, W., Mauava.
 Irwin, H. J., Baraboo.
 Ishmael, O. E., Mt. Horeh.
 Isou, G. W., Crandon.
 Iverson, M., Stoughton.
 Ivy, R. H., Milwaukee.
 Jackey, F. D., Thorp.
 Jackson, F. A., Eldorado.
 Jackson, J. A., Mosinee.
 Jackson, J. A., Jr., Madison.
 Jackson, J. A., Sr., Madison.
 Jackson, R. H., Madison.
 Jacobs, E. C., Durand.
 James, A. W., Muscoda.
 Jamieson, Geo., Lone Rock.
 Jardine, E. W., Alma.
 Jefferson, H. A., Clintonville.
 Jeffery, L. A., Weyauwega.
 Jegi, H. A., Galesville.
 Jensen, A. B., Menasha.
 Jermain, H. F., Milwaukee.
 Jermain, L. F., Milwaukee.
 Jewell, T. M., Mindoro.
 Jobse, P. H., Milwaukee.
 Jobse, W. P., Milwaukee.
 Johnson, A. T., Sauk City.
 Johnson, A. W., Milwaukee.
 Johnson, C. E., Chicago, Ill.
 Johnson, Fred, Eau Claire.
 Johnson, F. G., Iron River.
 Johnson, F. P., Ontario.
 Johnson, H. B., Tomah.
 Johnson, H. C., Glen Flora.
 Johnson, J. C., Ogdensburg.
 Johnson, Laura M., Chicago, Ill.
 Johnston, G. B., Abbottsford.
 Johnston, H. E., Oshkosh.
 Johnston, W. M., Dale.
 Johnston, W. W., Racine.
 Jones, A. W., Randolph.
 Jones, David T., Wausau.
 Jones, E. H., Weyauwega.
 Jones, M. L., Wausau.
 Jones, R. W., Wausau.
 Jones, Susan, Racine.
 Jones, W. C., Kilbourn.
 Jorgenson, P. P. M., Kenosha.
 Joseph, Wm. A., Hancock.
 Judge, Thos. A., Milwaukee.
 Juergens, L. W., Milwaukee.
 Junck, J. A., Sheboygan.
 Kagy, M. O., Milwaukee.
 Kahn, Joseph, Milwaukee.
 Kalling, H., Black River Falls.
 Kappelmann, F. W., Milwaukee.
 Karnopp, G. L., Mischicot.
 Karsten, A. C., Horicon.
 Kastner, A. L., Milwaukee.
 Katz, H. M., Cedarburg.
 Kaumheimer, G. J., Milwaukee.
 Kauth, P., Schleiingerville.
 Kay, H. M., Madison.
 Kaysen, Ralph, Watertown.
 Keech, J. S., Racine.
 Keenan, Harry, Stoughton.
 Keithley, J. A., Palmvra.
 Keithley, J. W., Beloit.
 Keland, G. A., Madison.
 Keland, H. B., North Cape.
 Keller, J. M., St. Louis, Mo.
 Kellner, V. V., Marihel.
 Kellogg, E. W., Milwaukee.
 Kelly, C. D., Blair.
 Kelly, D. M., Baraboo.
 Kelly, F. H., Merrill.
 Kelly, John, Cato.
 Kelly, W. W., Green Bay.
 Kemper, W. G., Manitowoc.
 Kennedy, F. H., Greenwood.
 Kenney, G. F., Milwaukee.
 Kenney, R. D., Milwaukee.
 Kermott, E. P., Hudson.
 Kersten, A. M., De Pere.
 Kersten, N. M., De Pere.

- Kettchint, E. J., Milwaukee.
 Keyes, S. M., Owen.
 Keyes, T. B., Park Falls.
 Kiefer, J. G., Milwaukee.
 King, C. F., Hudson.
 King, G. F., Green Bay.
 King, H. V., Pepin.
 Kings, J. S., Watertown.
 Kinne, Ed., Elkhorn.
 Kissinger, C. A., Melrose.
 Kissling, A. C., Milwaukee.
 Kitzke, F. W., Milwaukee.
 Klein, J. T., Columbus.
 Kleinboehl, J. W., Random Lake.
 Kleinbans, F. A., Milwaukee.
 Kleinbans, M. A., Milwaukee.
 Kleinschmidt, H. W., Oshkosh.
 Klemm, L. F., Milwaukee.
 Kuapp, E. J., Rice Lake.
 Knauf, A. J., Sheboygan.
 Knauf, F. P., Kiel.
 Knauf, G. E., Sheboygan.
 Knauf, N. J., Chilton.
 Knowles, W. L. M., Spooner.
 Knox, C. S., Superior.
 Kuox, E. S., Bowler.
 Kuntson, Oscar, Osseo.
 Koch, M. J., Milwaukee.
 Koehler, A. G., Oshkosh.
 Koehler, J. P., Milwaukee.
 Korthals, F. J., Milwaukee.
 Kradwell, W. T., Wauwatosa.
 Krahn, A. J., Beaver Dam.
 Krahn, G. W., Ocouton Falls.
 Kratsch, A. W., Milwaukee.
 Kraut, E., Beetown.
 Krebs, W. D., Cecil.
 Kreitzer, A. J., Sawyer.
 Kremers, Alex., Milwaukee.
 Kreutzer, A. G., Milwaukee.
 Kriz, G. H., Milwaukee.
 Krohu, H. C., New Holstein.
 Kron, L. O., Menomonie.
 Krueger, B., Cudahy.
 Krumme, S. A., Fond du Lac.
 Krygiar, A. A., Milwaukee.
 Kulig, A. H., Independence.
 Kunny, B., Cylon.
 Kylo, J. C., Superior.
 La Breck, F. A., Eau Claire.
 Lacey, S. W., Footville.
 Lademann, O. E., Milwaukee.
 Ladwig, W. A., Wausau.
 Laird, J. J., Black Creek.
 Lalor, J. C., Sauk City.
 Lambeck, F. J., Milwaukee.
 Lang, Jacob, Milwaukee.
 Langenfeld, P. F., Theresa.
 Langland, P., Milwaukee.
 Lansdowne, F. B., Keosha.
 Larsen, G. A., Hayward.
 Larson, L. A., Colfax.
 Lasche, P. G., Richland Center.
 Latham, C. O., Green Bay.
 Lander, C. E., Viroqua.
 Laughlin, D. M., Milwaukee.
 Law, W. G., Glidden.
 Lawler, C. F., Hilbert.
 Lawler, G. W., Sussex.
 Lawler, T. S., Lyndon Station.
 Lawrence, G. H., Fond du Lac.
 Layton, O. M., Fond du Lac.
 LeCron, W. L., Milwaukee.
 Lee, J. H., Iola.
 Lee, M. A., Superior.
 Leeson, F. W., Beloit.
 Lehmann, F. W., Hartford.
 Lehnkering, C. F., Titusville, Fla.
 Leicht, Phillip, Lake Mills.
 Leitzell, P. W., Benton.
 Leland, A. M., Whitewater.
 Lemmel, J. T., Albany.
 Lemmer, G. M., Spooner.
 Lemon, C. H., Milwaukee.
 Lenfesty, J. P., De Pere.
 Leonard, C. W., Fond du Lac.
 Lester, W. A., Onalaska.
 Lettenberger, Jos., Milwaukee.
 Levings, A. H., Milwaukee.
 Levitas, I. E., Green Bay.
 Lewis, C. H., Milwaukee.
 Lewis, J. M., Bloomington.
 Lid, T. A., Marinette.
 Lillie, O. R., Milwaukee.
 Lincoln, W. S., Dodgeville.
 Lindores, J. D., Stevens Point.
 Lindow, G. E., Watertown.
 Lindsay, W. T., So. Madison.
 Linkman, E. J., Milwaukee.
 Linn, W. N., Oshkosh.
 Lintelman, F. R., Janesville.
 Little, W. D., Malden Rock.
 Lobedan, E. T., Milwaukee.
 Lochemes, W. T., Milwaukee.
 Lockhart, C. W., Mellen.
 Lockhart, J. W., Oshkosh.
 Loge, E. S., Milwaukee.
 Lohmiller, R. K., Superior.
 Longley, J. R., Fond du Lac.
 Loomis, E. E., Janesville.
 Loope, T. E., Iola.
 Looze, J. J., Grand Rapids.
 Lorenz, W. F., Mendota.
 Lothrop, C. A., Ripon.
 Lotz, Oscar, Milwaukee.
 Loughnan, A. J., Ocoumowoc.
 Love, G. E., Waukesha.
 Lovenhart, A. S., Madison.
 Ludden, H. D., Mineral Point.
 Lueck, G. W., La Crosse.
 Luhman, F. S., Manitowoc.
 Lunaley, W. A., Ellsworth.
 Lumsden, Wm., Knapp.
 Lundmark, L. M., Ladysmith.
 Lyman, J. V. R., Eau Claire.
 Lynch, D. W., West Bend.
 Lynch, H. M., Allenton.
 Lyons, J. A., Bear Creek.
 McBeath, H. F., Milwaukee.
 McCabe, Harry, Milwaukee.
 McCabe, P. G., Fond du Lac.
 McCallu, A. E., Waupaca.
 McCallister, G. H., Avoca.
 McCarey, A. J., Green Bay.
 McCarthy, H. C., Richland Center.
 McChesney, W. M., Edgerton.
 McCormack, I. N., Brillion.
 McCorkle, S. C., Milwaukee.
 McCormick, H., New Auburn.
 McCracken, R. W., Union Grove.
 McCutcheon, W. R., Thorp.
 McDermott, L. C., Blanchardville.
 McDill, J. R., Milwaukee.
 McDonald, H. F., Hollandale.
 McDougall, G. T., Fond du Lac.
 McDowell, A. J., Soldiers Grove.
 McEachern, W. A., Superior.
 McGarty, M. A., La Crosse.
 McGanley, F. M., Fond du Lac.
 McGill, P. J., Superior.
 McGovern, J. J., Milwaukee.
 McGovern, P. H., Milwaukee.
 McGrath, E. F., Appleton.
 McGrath, Edw., Baraboo.
 McGuire, W. H., Janesville.
 McHugh, F. T., Chippewa Falls.
 McIndoe, T. B., Rhinelander.
 McKee, F. W., Richland Center.
 McKellar, A., Blanchardville.
 McKeon, Phillip, New Richmond.
 McKinnon, G. E., Prentice.
 McKivett, W., Milwaukee.
 McKnight, G. B., Fond du Lac.
 McLaughlin, H. J., Glen Haven.
 McMahon, F. B., Milwaukee.
 McMahon, J. P., Milwaukee.
 McNaughton, W. T., Milwaukee.
 McNicholas, L. T., Athens.
 McRae, J. D., Chippewa Falls.
 McRae, M. F., Milwaukee.
 Maas, W. C., Rio.
 MacArthur, D. S., La Crosse.
 MacCollum, C. L. R., Manitowoc.
 MacCormack, E. A., Whitehall.
 MacDonald, Edw., Cuba City.
 MacDonald, W. H., Lake Geneva.
 Mack, J. A., Madison.
 MacKechnie, R. S., Hillsboro.
 Mackoy, P. W., Milwaukee.
 MacLachlan, W. G., McFarland.
 MacMillan, A. E., Stevens Point.
 Madison, J. D., Milwaukee.
 Maechtle, E. W., West Allis.
 Maes, C. G., Kimberly.
 Malkin, G. M., Milwaukee.
 Malloy, T. E., Random Lake.
 Malone, F. W., Waterford.
 Malone, T. C., Milwaukee.
 Malone, W. F., Milwaukee.
 Marchessault, J. A., Ashland.
 Markson, S. M., Milwaukee.
 Marquis, A. J., Wausaukee.
 Marsden, T. H., Fennimore.
 Marsh, J. M., Elkhorn.
 Marshall, F. P., No. Fond du Lac.
 Marshall, V. F., Appleton.
 Martens, W. A., Milwaukee.
 Martin, Geo., Balsam Lake.
 Mason, C. H., Superior.
 Mason, E. L., Eau Claire.
 Mason, G. F., Milwaukee.
 Mason, V. A., Marshfield.
 Mathiesen, J., Eau Claire.
 Mathieson, A., Neillsville.
 Matthews, J. B., Milwaukee.
 Mauermaun, J. F., Monroe.
 Maurer, A. A., La Crosse.
 Maxam, M., Schleihsingerville.
 Maxson, F. S., Milwaukee.
 May, J. V., Marinette.
 Meachem, J. G., Jr., Racine.
 Meachem, J. G., Sr., Racine.
 Meacher, B. C., Portage.
 Meade, F. S., Madison.
 Meanwell, W. E., Columbus.
 Meany, J. E., Manitowoc.
 Mears, G. V., Fond du Lac.
 Mecum, J. B., Bagley.
 Meiklejohn, D. V., Fond du Lac.
 Melaas, W. G., Beloit.
 Mensing, E., Milwaukee.
 Merrill, W. G., Grand Rapids.
 Merten, P. J., Milwaukee.
 Mertens, H. G., Bayfield.
 Mesch, A. A., Sankville.
 Messmer, C., Milwaukee.
 Meusel, Harry, Oshkosh.
 Meyer, E. E., Brillion.
 Meyer, R. C., Elkhart Lake.
 Meyers, J. M., Superior.
 Meyst, C. H., Burlington.
 Middleton, W. S., Madison.
 Midelfart, H. C., Eau Claire.
 Midgley, A. E., Whitewater.
 Mieding, A. E., Milwaukee.
 Millbee, H. H., Marshfield.
 Millard, F. D., Milwaukee.
 Miller, E. A., Clutonville.
 Miller, E. W., Milwaukee.
 Miller, H. C., Whitewater.
 Miller, Thos., Oconomowoc.
 Miller, W. J., La Valle.
 Miller, W. S., Madison.
 Mills, N. P., Appleton.
 Minahan, J. R., Green Bay.
 Minahan, P. R., Fond du Lac.
 Minahan, R. E., Green Bay.
 Mishoff, I. D., Milwaukee.
 Mitchell, E. J., Brodhead.
 Mitchell, R. E., Eau Claire.
 Mitchell, S. R., Milwaukee.
 Mitten, A. A., Milwaukee.
 Mock, F. C., Milwaukee.
 Moe, H. B., Blanchardville.
 Moeller, J., Milwaukee.
 Moffat, H. L., Arpin.
 Mollinger, S. M., Milwaukee.
 Monk, R. W., Neillsville.
 Monroe, W. B., Monroe.
 Monstad, J. W., New London.
 Montgomery, A., Milwaukee.
 *Montgomery, A., Eau Claire.
 Montgomery, R. C., Madison.
 Montgomery, Wm., Eau Claire.
 Moore, E. E., Merrillon.
 Moore, G. W., Antigo.
 Moore, L. A., Monroe.
 Moore, W. N., Appleton.
 Moquin, E. I., Fairwater.
 Moraux, Felix, Luxemburgh.
 Morgan, J. J., Durand.
 Morgenroth, H. W., Oshkosh.
 Mork, Ole, Blair.
 Morley, F. E., Viroqua.
 Morris, E. K., Merrill.
 Morris, R. C., Ft. Atkinson.
 Morris, Sarah, Madison.
 Morrison, Morris, Cashton.
 Morrison, W. W., Edgerton.
 Morse, E. A., Appleton.
 Mortenson, O. N., Grand Rapids.
 Morter, C. W., Milwaukee.
 Morter, R. E., Milwaukee.
 Morton, H. H., Cobb.
 Moulding, F. C., Watertown.
 Mountain, J. M., Milwaukee.
 Moyer, S. R., Monroe.
 Mudroch, J. A., Columbus.
 Mueller, W. E., Green Bay.
 Muenzner, R. J., Milwaukee.
 Mulford, E. R., La Crosse.

- Mulvaney, F. M., Mariou.
Munger, D. C., Ellsworth.
Munkwitz, F. H., Milwaukee.
Munu, W. A., Jaunesville.
Murphy, E. C., Wilmot.
Murphy, E. R. F., Antigo.
Murphy, G. F., Junction City.
Murphy, S. W., Kenosha.
Murphy, W. J., Milwaukee.
Murphy, W. T., Waukesha.
Muth, Carl, Sheboygan.
Myers, A. W., Milwaukee.
Myers, C. E., Milladore.
Myers, I. A., Cottage Grove.
Myrick, A. L., Eastman.
Nadeau, A. T., Marinette.
Nadeau, E. G., Green Bay.
Nainka, A., Boaz.
Nason, W. G., Clinton.
Nauth, D. F., Kiel.
Nedry, G. C., Menomonie.
Nedry, H. M., Medford.
Nelson, A. L., Racine.
Nelson, A. N., Clear Lake.
Nelson, N. A., Madisou.
Nelson, O. A., Park Falls.
Nelson, O. O., Arcadia.
Netvig, G. A., Prairie Farm.
Newell, Frank, Burlington.
Newman, E. C., Berliu.
Newman, Robt., Chicago, Ill.
Newton, J. E., Windsor.
Nichols, F. C., Wausau.
Nichols, R. M., Sheboygan Falls.
Nichols, W. T., Milwaukee.
Nicholsou, J. D., Milltown.
Nielsou, G. W., Milwaukee.
Nielson, W. H., Milwaukee.
Nims, C. A., Oshkosh.
Nixon, A. J. W., Detroit, Mich.
Nixon, H. G. B., Hartland.
Nixou, R. T. A., Brookfield.
Noble, J. B., Waukesha.
Nobles, B. O., Milwaukee.
Noer, Julius, Stoughton.
Noer, P. J., Wabeno.
Nolan, W. N., Kaukauna.
Nolte, L. G., Milwaukee.
North, C. F., Beaver Dam.
Notbobm, W. R., Dousmau.
Nott, G. W., Racine.
Nowack, L. H., Watertown.
Noyes, G. B., Stoue Lake.
*Nussle, A. C., Chippewa Falls.
Nuzum, Frank, Janesville.
Nuzum, T. W., Janesville.
Nuzum, W. F., Baraboo.
Nye, F. T., Beloit.
Nystrum, C. E., Medford.
O'Brien, H. J., Superior.
O'Brien, H. N., Darien.
O'Brien, J. M., Oregon.
O'Brien, T., St. Nazianz.
O'Brien, W. T., Ashland.
O'Connell, D. C., Milwaukee.
O'Connell, J., Watertown.
O'Connell, J. E., Milwaukee.
O'Conner, W. F., Ladysmith.
O'Dell, L. E., Wilson.
O'Leary, T. J., East Troy.
O'Leary, T. J., Superior.
Oakland, H. G., Milwaukee.
Oatway, W. H., Waukesha.
Oberembt, B., Milwaukee.
Obertin, C. A., Union Grove.
Oettiker, Jas., Platteville.
Ogden, H. V., Milwaukee.
Oliver, C. H., Boyceville.
Oliver, T. J., Greu Bay.
Olmsted, A. O., Green Bay.
Olsen, M. I., Des Moines, Ia.
Olson, A. K., Etrick.
Olson, A. L., Stoughton.
Olson, E. A., Osseo.
Omsted, Nils, Stoughton.
Orchard, H. J., Superior.
Orr, E. D., Mt. Hope.
Orton, Susanne, Darlington.
Ouellette, C. J., Oconto.
Overbaugh, J. H., Hartland.
Ovitz, E. G., Linden.
Oyen, Martin, Ellsworth.
Ozanne, I. E., Neenah.
Ozanne, J. T., Oshkosh.
Pake, S. G., Hayward.
Palm, C. A., Kenosha.
Palmer, C. W., Cassville.
Palmer, J. A., Arcadia.
Palmer, W. H., Janesville.
Panetti, E. J., Milwaukee.
Panetti, P. A., Hustisford.
Parham, G. H., Necedah.
Park, W. H., Glenwood City.
Parke, Geo., Sylvan.
Parke, W. B., Camp Douglas.
Parker, A. S., Clinton.
Parker, T. G., Rome.
Parmuter, E. L., Mondovi.
Parmley, J. P., Mineral Point.
Partridge, O. F., Mattoon.
Pascheu, J. G., Milwaukee.
Patek, A. J., Milwaukee.
Payne, A. L., Eau Claire.
Peairs, R. P., Milwaukee.
Pearce, W. J., Dodgeville.
Pearsou, L. M., Tomabawk.
Pease, W. A., Jr., Rio.
Pease, W. A., Sr., Otsego.
Peck, W. W., Darlington.
Peebles, Mary, Shullsburg.
Peehu, F. G., Corliss.
Pegram, J. W., Milwaukee.
Pelton, L. H., Waupaca.
Pember, J. F., Jaunesville.
Pembletou, W. C., Wittenberg.
Perrin, G. H., Meunomie Falls.
Perrin, H. E., Star Prairie.
Perry, Gentz, Amery.
Peters, H. A., Oconomowoc.
Peterson, C. F., Independence.
Peterson, E. F., Wauwatosa.
Petersou, G. E., Waukesba.
Petzke, E. A., Hixton.
Pfeifer, C. W., Sheboygan Falls.
Pfeifer, F. J., New London.
Pfeifer, H. A., Jackson.
Pfeil, R. C., Thiensville.
Pfeiler, Adam, Sheboygan Falls.
Pfister, Franz, Milwaukee.
Pfisterer, F. W., Milwaukee.
Phaneuf, S. J., Somerset.
Phillips, T. C., Milwaukee.
Phillips, Clara M., Madison.
Phillips, L. J., Weyerhauser.
Pickering, C. R., Muscoda.
Pickett, S. L., Bayfield.
Pierce, E. D., Trempealeau.
Pierson, P. R., Reedstown.
Pinkerton, W. T., Prairie du Chien.
Pitz, M. N., Neenah.
Pleyte, A. A., Wales.
Plumlee, R. S., Smiths Grove, Kentucky.
Pomainville, Frank, Grand Rapids.
Pomainville, Geo., Nekoosa.
Pope, F. J., Racine.
Pope, F. W., Racine.
Poppe, Alf., Friendship.
Poppe, H. B. B., Wautoma.
Poster, E. M., Columbus.
Post, C. C., Barron.
Potter, J. Y., New London.
Potter, L. A., Superior.
Potter, R. P., Marshfield.
Powell, J. J., Galesville.
Powers, C. D., Kingston.
Powers, F. H., Bucyrus, Ohio.
Powers, H. W., Milwaukee.
Powers, J. W., Burlington.
Pratt, Maud, Appleton.
Press, G. W., Cambria.
Pretts, W. W., Platteville.
Prince, L. H., Madisou.
Pritchard, J. F., Manitowoc.
Proctor, T. C., Sturgeon Bay.
Prouty, W. A., Burlington.
Provost, A. J., Oshkosh.
Pugh, G. A., Kenosba.
Pullen, A. J., No. Fond du Lac.
Puls, A. J., Milwaukee.
Purcell, H. E., Madison.
Purdy, A. H., Milwaukee.
Purtell, E. J., Milwaukee.
Purtell, J. A., Milwaukee.
Quam, Jacob, Deerfield.
Quick, E. W., Milwaukee.
Quinn, R. B., Darlington.
Raasock, H., Nelsonville.
Raek, G. J., Princeton.
Radloff, A. C., Plymouth.
Ragan, W. F., Milwaukee.
Ragan, W. J., Shawano.
Randall, A. J., Kenosha.
Randall, M. W., Blue River.
Rasmussen, H., Milwaukee.
Rath, R. R., Granton.
Rathbun, J. W., Prairie du Chien.
Rathert, E. T., Chilton.
Ravu, M., Merrill.
Raymond, R. G., Brownsville.
Rea, A. L., Chippewa Falls.
Read, Flora, Fond du Lac.
Reagles, Robt., Arlington.
Reay, G. R., La Crosse.
Rector, A. E., Appleton.
Redelings, T. J., Marinette.
Reeve, J. S., Appleton.
Reeves, S. T., Albany.
Regan, E. D., Milwaukee.
Rehorst, J. J., Foud du Lac.
Reich, H. C., Sheboygan.
Reich, W. F., Milwaukee.
Reichert, J. E., West Bend.
Reineck, C., Appleton.
Reinekiug, H., Milwaukee.
Reinert, E. N., Cleveland.
Reinhardt, J. P., Fountain City.
Reinhart, D. B., Merrill.
Remer, W. H., Chaseburg.
Reynolds, J. C., Lake Geneva.
Rheineck, A. F., Milwaukee.
Rhode, H. P., Green Bay.
Rice, C. W., Delavan.
Rice, D. B., Fayette.
Rice, D. S., Stevens Point.
Rice, E. M., Milwaukee.
Rice, F. A., Delavan.
Rice, R. H., Delavan.
Rice, R. H., Milwaukee.
Richards, C. A., Rhineland.
Riddle, A., Osbkosh.
Riddle, Julia, Oshkosh.
Rideout, M. E., Hortonville.
Ridgman, A. L., Grand Rapids.
Ridgway, E. T., Elkhorn.
Riehl, F. W., Milwaukee.
Riley, E. A., Park Falls.
Riley, P. E., Elk Mound.
Ring, H. F., Montreal.
Rinker, F. C., Madison.
Riordau, J. F., Berliu.
Ripley, G. H., Kenosba.
Risher, F. O., Shell Lake.
Ritche, G. A., Appleton.
Robb, E. H., Sturgeon Bay.
Robb, J. J., Green Bay.
Roberts, D. W., Milwaukee.
Roberts, J. A., Portage.
Robinsou, H. A., Kenosha.
Roby, H. S., Milwaukee.
Rock, J. N., Milwaukee.
Rodermund, A. M., Madison.
Rohr, J. H., No. Milwaukee.
Roetbke, H. W., Milwaukee.
Rogers, A. W., Milwaukee.
Rogers, E. H., Stevens Point.
Rogers, F. C., Oconomowoc.
Rogers, P. F., Milwaukee.
Rofls, T. H., Milwaukee.
Rollefson, C. J., Superior.
Rood, J. F., Darien.
Rose, Felix, Coleman.
Rose, J. F., Lena.
Rosenberry, A. B., Wausau.
Rosenheimer, M. A., Fox Lake.
Roshenthal, Geo., Milwaukee.
Rosholt, J. A., La Crosse.
Ross, G. L., Menasha.
Ross, H. R. T., Ladysmith.
Ross, P. M., Milwaukee.
Rohtman, L., Wittenberg.
Rouse, H. A., Browntown.
Rowles, J. A., La Crosse.
Rowley, A. G., Middleto.
Rowley, C. C., Winnebago.
Roy, Emile, Tulsa, Okla.
Ruckle, W. M., Grand Rapids.
Ruethen, K. A., Ridgeland.
Rugh, R. E., Racine.
Ruhland, G. C., Milwaukee.
Rundell, Annie S., Beloit.
Ruschaupt, L. F., Milwaukee.
Russell, F. G., Milwaukee.
Russell, H. C., Milwaukee.
Ryan, C. E., Appleton.
Ryan, E., Sheboygan.
Rydell, C. B., Superior.
Salter, H. G., Cascade.
Sandborn, M. J., Appleton.
Sandin, N. V., Amery.
Sarazine, F. C., Superior.
Sargent, J. C., Milwaukee.

- Sarles, W. T., Sparta.
 Sarvela, H. L., Superior.
 Sathe, M. R., La Crosse.
 Sattler, J. M., Antigo.
 Sattre, O. M., Rice Lake.
 Sauerhering, D. L., Wausau.
 Saunders, Geo., Superior.
 Sauthoff, Aug., Mendota.
 Sauthoff, Mary, Mendota.
 Savage, G. F., Pt. Washington.
 Savage, G. T., Milwaukee.
 Sayle, R. G., Milwaukee.
 Sayles, L. W., Baraboo.
 Saylor, Herbert, Merrill.
 Scantleton, J. M., Sparta.
 Schallern, Bruno, Ripon.
 Schallern, O., Ripon.
 Schaper, H., Appleton.
 Schee, Jno., Westby.
 Scheid, M. M., Rosendale.
 Schein, J. E., Oshkosh.
 Schell, Ida L., Milwaukee.
 Schenmer, A. L., Colby.
 Schenrich, L. G., Tomah.
 Schiek, I. E., Rhineland.
 Schiller, L., Milwaukee.
 Schlegel, H. T., Wausau.
 Schlesselman, G. H., Fond du Lac.
 Schmelung, A. F., Columbus.
 Schmidt, E. S., Green Bay.
 Schmidt, F. M., Eagle.
 Schmidt, J. A., Brillion.
 Schmit, A. L., Beloit.
 Schmitt, F., Milwaukee.
 Schmitt, G., Milwaukee.
 Schmitt, Louis, Milwaukee.
 Schmitt, Phil., Milwaukee.
 Schmitz, W. C., School Hill.
 Schneider, Fred, New London.
 Schneider, Jno., Oshkosh.
 Schneider, Jos., Milwaukee.
 Schnell, W. H., Superior.
 Schnug, Max, Bonduel.
 Schoen, Chas., Milwaukee.
 Schoen, R. E., Beaver Dam.
 Scholz, G. M., Milwaukee.
 Schoofs, J. J., Malone.
 Schram, C. F. N., Beloit.
 Schreiner, J. K., Westby.
 Schriber, E. L., Caledonia.
 Schroeckenstein, R. S., Marlon.
 Schroeder, E. L., Shawano.
 Schroeder, H. F., Marinette.
 Schroeder, J. C., Milwaukee.
 Schuldt, C. M., Platteville.
 Schulz, F. M., Wauwatosa.
 Sehwalbach, C. G., Juneau.
 Schwartz, A. B., Milwaukee.
 Schwartz, Rollin, Chetek.
 Schwarz, S. G., Humbird.
 Schweitzer, G. J., St. Cloud.
 Seollard, J. T., Milwaukee.
 Scott, B. E., Berlin.
 Scott, J. R., Appleton.
 Seaman, G. E., Milwaukee.
 Searle, D. R., Superior.
 Sears, H. B., Beaver Dam.
 Seelman, J. J., Milwaukee.
 Seemann, W. O., Eau Claire.
 Seidel, J. G., Warrens.
 Seldon, W. B., Thorp.
 Senn, C. U., Ripon.
 Senn, F. C., Oshkosh.
 Senn, Geo., DePere.
 Senn, U., Milwaukee.
 Sexton, W. G., Marshfield.
 Seyman, S. A., Elcho.
 Shaffertzick, Chas., Denver, Col.
 Shaw, A. O., Ashland.
 Shaw, B. W., Wauwaukee.
 Shaw, J. L., Manitowoc.
 Shaykett, F. E., Brandon.
 Shearer, A. T., Edgerton.
 Shearer, R. D., Milwaukee.
 Sheehy, T. J., Tomah.
 Sheldon, C. S., Madison.
 Sheldon, W. H., Madison.
 Shepherd, W. A., Seymour.
 Sherman, Adin, Winnebago.
 Sherwood, M. W., Milwaukee.
 Shimek, A. J., Manitowoc.
 Shimonek, G. F., Milwaukee.
 Shinnick, T. F., Beloit.
 Shippy, V. J., Stevens Point.
 Shockley, H. O., Darlington.
 Sholdski, J., Milwaukee.
 Sibree, H. C., Sturgeon Bay.
 Siegmund, F. N., Ripon.
 Sieker, A. W., Franklin.
 Siekert, H. P., Milwaukee.
 Sifton, H. A., Milwaukee.
 Silverthorn, F. R., Berlin.
 Simon, L. J., Horlecon.
 Simons, N. S., Taylor.
 Simpson, J. E., Endeavor.
 Sincok, H. A., Odanah.
 Sizer, E. M. A., Fall Creek.
 Skwor, C. J., Neosho.
 Slaughter, A. W., Green Bay.
 Sleyster, Rock, Waupun.
 Smedal, G., La Crosse.
 Snieding, Geo., Mineral Point.
 Smiles, C. J., Ashland.
 Smith, A. D., Gilmanton.
 Smith, C. C., Scandinavia.
 Smith, C. E., Beloit.
 Smith, Chas. M., Jr., Evansville.
 Smith, E. A., Milwaukee.
 Smith, E. V., Fond du Lac.
 Smith, G. H., Hortonville.
 Smith, G. L., Jefferson.
 Smith, G. M., Chippewa Falls.
 Smith, J. Clyde, Beloit.
 Smith, J. F., Wausau.
 Smith, John W., Milwaukee.
 Smith, K. W., Madison.
 Smith, O. E., Mukwonago.
 *Smith, P. H., Racine.
 Smith, R. C., Superior.
 Smith, S. M., So. Milwaukee.
 Smith, S. M. B., Wausau.
 Smith, T. D., Neenah.
 Smith, W. P., Waupun.
 Solberg, A. A., Coon Valley.
 Soles, F. A., Spencer.
 Sommers, J. C., Madison.
 Sonnenburg, C. N., Sheboygan.
 Sorenson, S., Racine.
 Southwick, F. A., Stevens Point.
 Spawn, M. G., Beloit.
 Spencer, G. F., Evansville.
 Spencer, L. E., Wausau.
 Sperry, S. B., Milwaukee.
 Sperry, W. P., Phillips.
 Spiegelberg, E. H., Boscobel.
 Spitz, M. M., Milwaukee.
 Stack, G. F., Independence.
 Stack, S. S., Milwaukee.
 Staehle, Max, Manitowoc.
 Stalker, H. J., Kenosha.
 Stannard, G. H., Sheboygan.
 Starnes, Brand, Mauston.
 Starr, F. W., Stanley.
 Stebbins, W. W., Verona.
 Steele, G. A., Poynette.
 Steele, G. M., Oshkosh.
 Steffen, I. D., Antigo.
 Steffen, L. A., Antigo.
 Stephenson, W. L., Ladysmith.
 Stevens, F. E., Bristol.
 Steves, B. J., Menomonie.
 Stewart, F. W., Bonduel.
 Stiles, F. P., Sparta.
 Stiles, V. W., Sparta.
 Stirn, F. J., Iron Ridge.
 Stockman, B. G., Woodville.
 Stoddard, C. H., Milwaukee.
 Stoelting, C. W., Oconto.
 Stoland, L., Eau Claire.
 Stormont, C. J., Viola.
 Stovall, W. D., Madison.
 Stoye, J. P., Theresa.
 Stratton, F. A., Milwaukee.
 Strauss, F., Milwaukee.
 Stubenvoll, C. E., Shawano.
 Studley, F. C., Milwaukee.
 Stuesser, C. N., Oconomowoc.
 Suiter, F. C., La Crosse.
 Sullivan, A. G., Madison.
 Sullivan, Jos. D., Kenosha.
 Sullivan, J. T., Milwaukee.
 Sulman, F. S., Manitowoc.
 Sure, J. H., Milwaukee.
 Surensen, M., Prairie du Chien.
 Sutherland, C. H., Janesville.
 Sutherland, F. E., Janesville.
 Suttle, H. J., Viroqua.
 Swarthout, E. C., La Crosse.
 Sweemer, Wm., Milwaukee.
 Sweetman, R. H., Green Bay.
 Sykes, H. D., Milwaukee.
 Sykes, L. G., Milwaukee.
 Sylvester, Homer, Livingston.
 Tanner, E. E., Milwaukee.
 Tanner, G. F., Turtle Lake.
 Tanner, H. B., San Antonio, Tex.
 Tarnutzer, B. C., Beaver Dam.
 Tarter, J. W., Iron River.
 Tasche, C. T., Sheboygan.
 Tasche, J. T., Sheboygan.
 Taugher, A. J., Milwaukee.
 Taugher, J. P., Milwaukee.
 Taylor, D. A., Hamilton, Mont.
 Taylor, E. A., Racine.
 Taylor, F. B., Madison.
 Taylor, J. G., Milwaukee.
 Taylor, L. L., Waupun.
 Taylor, R. W., Pewaukee.
 Teitgen, A., Manitowoc.
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 Thomas, J. S., Milwaukee.
 Thomas, W. O., Clinton.
 Thompson, A. S., Mt. Horeb.
 Thompson, Bertha V., Oshkosh.
 Thompson, E. X., Cudahy.
 Thompson, F. A., Milwaukee.
 Thompson, G. E., Kenosha.
 Thompson, I. F., Eau Claire.
 Thompson, J. B., Wittenberg.
 Thompson, R. D., Reedsburg.
 Thompson, W. L., Sheboygan.
 Thomson, W. J., Portage.
 Thorndike, Wm., Milwaukee.
 Thorne, J. P., Janesville.
 Tibbits, U. J., Waukesha.
 Tiedeman, E. J., De Soto.
 Tillson, E. M., Milwaukee.
 Timm, E. W., Milwaukee.
 Tisdale, L. C., Milwaukee.
 Titel, E. A., Greenleaf.
 Tkadlec, Jos., Lime Ridge.
 Tomkiewicz, I. G., Milwaukee.
 Tompach, Emil, Racine.
 Torney, T. W., Madison.
 Torpy, T. G., Minoqua.
 Towne, W. H., Shiocton.
 Townsend, E. H., Juneau.
 Tranecke, H. M., Bloomer.
 Treadwell, C. L., Kilbourn.
 Treat, C. R., Sharon.
 Treglow, L. H., Livingston.
 Trevitt, Margaret, Wausau.
 Trowbridge, C. H., Viroqua.
 Trowbridge, Wm., Viroqua.
 Tryon, F. E., Merrimac.
 Tuffley, F. S., Boscobel.
 Tupper, E. E., Eau Claire.
 Twhig, D. J., Fond du Lac.
 Twhig, H. E., Fond du Lac.
 Twhig, J. E., Fond du Lac.
 Tyvand, J. C., Whitehall.
 Urquhart, C. C., Hurley.
 Van Altena, L. A., Jr., Cedar Grove.
 Vanderlind, L. A., Wantoma.
 Van der Ven, J. M., Martell.
 Van Hengel, G. L., Waupun.
 Van Kirk, F. W., Janesville.
 Van Schalk, R. E., Caroline.
 Van Valzah, Robt., Madison.
 Van Zanten, Wm., Sheboygan.
 Vedder, J. B., Marshfield.
 Verbeck, S. F., Lodi.
 Vernon, S. G., Madison.
 Vogel, C. A., Elroy.
 Vogel, C. C., Elroy.
 Voight, A. H., Oostburg.
 Voje, J. H., Oconomowoc.
 Von Beust, M., Milwaukee.
 Von Neupert, Carl, Sr., Stevens Point.
 Von Neupert, Carl, Jr., Stevens Point.
 Vosburg, W. H., Cooperstown.
 Voskuil, Anthony, Cedar Grove.
 Wade, F. S., New Richmond.
 Wade, B. J., Belleville.
 Wagner, Karl, Milwaukee.
 Wagner, N. B., Racine.
 Wahl, C. M., Spring Green.
 Wahl, H. S., Wausau.
 Waite, W. S., Kendalls.
 Wakefield, G. F., West Salem.
 Wakefield, S. R., West Salem.
 Walbridge, F. E., Stevens Point.
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- Walch, F. C., Black Creek.
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 Walker, F. W., St. Croix Falls.
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 Wall, H. J., Richland Center.
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 Walters, D. N., Campbellsport.
 Warfield, L. M., Milwaukee.
 Was, Edw., Oostburg.
 Washburn, R. G., Milwaukee.
 Washburn, W. H., Milwaukee.
 Waters, Don, Grand Rapids.
 Waters, Hugh, Nekeosa.
 Watkins, C. W., Oconto.
 Watson, F. V., Antigo.
 Wauffe, G. C., Janesville.
 Weaver, L. A., Iron Belt.
 Webb, E. P., Beaver Dam.
 Webb, W. B., Beaver Dam.
 Weber, A. J., Milwaukee.
 Weber, H. F., Newburg.
 Webster, B. N., Rice Lake.
 Webster, F. E., Amherst.
 Wege, W. F., Milwaukee.
 Wehle, W. J., West Bend.
 Weideman, W. G., Milwaukee.
 Weidner, Max, Milwaukee.
 Weingart, W. F., Milwaukee.
 Welch, T. R., Rhinelander.
 Weld, H. J., Campbellsport.
 Wendstrand, D. E., Milwaukee.
 Wenker, R. J., Milwaukee.
 Wentzell, W. L., Stoughton.
 Wenzel, J. V., Ashland.
 Werner, C. E., St. Cloud.
 Werner, H. C., Union Grove.
 Werner, Nels, Barron.
 Werner, R. F., Eau Claire.
 Westgate, H. J., Rhinelander.
 Westhofen, R. C., Milwaukee.
 Westphal, H. G., Polar.
 Wetzler, S. H., Milwaukee.
 Wheeler, W. P., Oshkosh.
 White, A. G., Milwaukee.
 White, A. S., Rice Lake.
 White, R. M., Prairie du Chien.
 White, W. E., Burlington.
 Whitehorn, E. E., Vesper.
 Whiteside, G. D., Plover.
 Whitney, D. C., Rice Lake.
 Whyte, W. F., Madison.
 Wichman, G. C., Rib Lake.
 Wiesender, A. J., Berlin.
 Wilcox, A. G., Solon Springs.
 Wiles, G. B., Sheboygan.
 Wiley, F. S., Fond du Lac.
 Wilkinson, J. A., Hales Corners.
 Wilkinson, M. R., Oconomowoc.
 Wilkowski, C. W., Chippewa Falls.
 Willard, L. M., Wausau.
 Williams, H. H., Sparta.
 Williams, Maude R., Milwaukee.
 Williams, R. L., Statesan.
 Williams, S. E., Chippewa Falls.
 Williams, W. B., Argyle.
 Williams, W. E., Cambria.
 Williamson, G. H., Neenah.
 *Williamson, J. L., Milwaukee.
 Wilmarth, A. W., Chippewa Falls.
 Wilson, C. J., Hiles.
 Windesheim, G., Kenosha.
 Wing, W. S., Oconomowoc.
 Winneman, F. A., Merrill.
 Winslow, F. R., Baraboo.
 Winter, A. E., Tomah.
 Witepalek, W. W., Algoma.
 Witte, D. H., Hartford.
 Witte, W. C. F., Milwaukee.
 Wochos, F. J., Green Bay.
 Wochos, W. M., Kewaunee.
 Wolf, H. E., La Crosse.
 Wolf, J., Milwaukee.
 Wolfgram, O. J., Lyons.
 Wolter, H. A., Green Bay.
 Wolters, H. F., Milwaukee.
 Wood, F. C., Waupaca.
 Woodhead, F. J., Merton.
 Wright, A. E., New Richmond.
 Wright, C. A., Delavan.
 Wright, F. R., West Allis.
 Wright, J. C., Antigo.
 Yaffe, Aaron, Milwaukee.
 Yanke, A. E., Milwaukee.
 Yates, C. A., Bangor.
 Yates, J. L., Milwaukee.
 Youmans, L. E., Mukwonago.
 Young, A. F., Wauwatosa.
 Young, G. H., Elkhorn.
 Young, J. H., Elkhorn.
 Young, W., Ft. Atkinson.
 Zaun, G. F., Milwaukee.
 Ziegler, E. J., Oxford.
 Ziegler, J. E. B., Eau Claire.
 Zierath, W. F., Sheboygan.
 Zilisch, W. E., Wausau.
 Zimmerman, Amelia, Kenosha.
 Zimmermann, C., Milwaukee.
 Zinn, A. J., Milwaukee.
 Zivnaska, J. F., Milwaukee.
 Zohlen, J. P., Sheboygan.
 Zuercher, J. C., La Crosse.
 Zwickey, W. H., Superior.

*Deceased.

ETIOLOGY OF COMMON COLDS.

From the experimental evidence presented by Foster it seems that the following facts have been established: Common colds of the ordinary type are infectious. It has been demonstrated experimentally that the virus of common colds occurs in the nasal secretions; and that this virus is capable of passing through Berkefeld filters which are impervious to ordinary bacteria. By the employment of special anaerobic methods the virus of common colds has been cultivated in vitro by Foster, and has proved capable of repeated recultivation in subcultures. Experimental inoculations have demonstrated that Berkefeld N filtrates of subcultures of the virus, in the second generation at least, are infective. A peculiar minute micro-organism has been isolated from cultures made from the filtered nasal secretions in common colds. This micro-organism can be passed through Berkefeld N filters, and has been recultivated from culture-filtrates. Although conclusive proof of its nature has not been adduced, the experiments suggest that the micro-organism described bears a definite relation to the true infective agent. Analysis of the results of Foster's experiments showed that of the ten men inoculated, seven developed clear cut and definite symptoms of acute coryza; two reacted questionably, while one remaining case exhibited no symptoms. The experiments were adequately controlled.—*Jour. of Inf. Dis., Nov. Abst. Jour. A. M. A., Nov. 24, 1917.*

Culver dung sodden in wine, till the wine be consumed, and then emplaistered hot to the gout, healeth the same perfectly. Use it morning and evening four or five days together.

LUMBAR PUNCTURE IN DELIRIUM. John H. Musser and Henry K. B. Hufford, Philadelphia (*Journal A. M. A., April 28, 1917*), says that in pneumonia, delirium is usually indicative of a severe infection which may carry off the patient or exhaust him through muscular exertion. The usual remedies are distinctly depressant and to give depressing drugs when the chief indication is to support the patient seems irrational. They review the literature on the relief of delirium tremens by lumbar puncture but say they have found no mention of it as useful in pneumonia in the standard works or the medical literature of the last four years. By analogy with delirium tremens, in which disease the most common theory is that increased intraspinal pressure is to blame rather than cerebral congestion, the rationale of lumbar puncture in pneumonia is justifiable. While there is no evidence of bacterial invasion of the meninges in ordinary pneumonia, it is presumable that in a certain number of cases the pneumococcal toxins may have a greater affinity for the spinal membranes than in others. They report briefly seven cases of pneumococcal delirium which were promptly relieved by spinal puncture. The mortality rate was right (four deaths), but delirium means very severe infection which may so aggravate the case as to destroy all the patient's chances for life if something cannot be done. Lumbar puncture is suggested as a measure to relieve a very severe symptom and not for any direct curative purposes.

Juniper berries are medicable against poison; for there is none of like operation like unto it. And Dioscorides saith also, that they do help against the poisons and the stinging of serpents.

THE WISCONSIN MEDICAL JOURNAL

OFFICIAL PUBLICATION OF THE STATE MEDICAL SOCIETY OF WISCONSIN

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Annual Subscription .. - - Two Dollars

Single Copies - - - Twenty-five Cents

Address all business communications to THE WISCONSIN MEDICAL JOURNAL, 504 Goldsmith Building, Milwaukee

Vol. XVI.

January, 1918

No. 8

EDITORIALS

SIMULATION OF DISEASE.

ATTENTION is called to the many devices to which men may resort in order to produce apparent illness when they are called up for examination before the Local Boards. In calling up the second quota the work of the Medical Boards will be much simplified by the division into classes as the result of the questionnaires. There will still be a large number of men to examine and among them will be those who seek to avoid the draft by simulating disease. A list of various symptoms which may be produced by a number of chemical, mechanical and pharmaceutical products occurs to all of us, and our attention needs only to be directed to this matter in order to put us on our guard.

The observing Medical Examiner should have no difficulty in detecting many of the pseudo-illnesses at a glance. Occasionally it might happen that some very clever ruse is used by the man, but isolation and observation and re-examination should always clear up the question of malingering.

It is surprising to read reports of substances used by men to produce simulation of various diseases. Substances have been rubbed on the body, taken internally, put in the eye, nose, ear, introduced into the rectum, and even injected into the bladder. Inflammations of various degrees in organs are produced, sometimes true pathological products are found such as albumin and glucose in

the urine. Practically all of the symptoms produced are of a transient nature. It is impossible to produce a real disease unless the causative agent were taken in sufficient dosage. It is doubtful if any man would go to such lengths as he might easily jeopardize his life, or at least his future health.

EVERY DOCTOR IN THE MEDICAL RESERVE CORPS.

WHAT an ideal situation it would be, if every doctor in the United States who is mentally, physically and morally fit, was in this Corps.

The time is coming, and in the immediate future, when the Medical Reserve Corps of the Army must be immensely augmented, and so as to enable the Surgeon General to have at his command for immediate assignment, as conditions demand, a sufficient number of trained medical officers, let us take the above thought seriously.

We all know, from past history, the conserving value of an efficient medical corps, and this means number, as well as training.

A statement made by one high in authority in the Surgeon General's Office, "that our fighting forces would be disseminated by sickness and casualties in six months, were it not for an efficient army Medical Corps," clearly emphasizes the importance of every doctor in the United States, meeting the requirements above referred to, accepting

a commission in the Medical Reserve Corps of the United States Army.

The struggle in which we are now engaged, and for which we are preparing to take such a prominent part, depends for its success as much upon the medical profession, as it does upon our combatant forces, and while we do not know that any such intention as herein suggested is in the mind of the Surgeon General, it would at least give him the necessary Corps of medical officers upon which to draw, and thus serve the best interests of our country, and the best interests of the medical officer serving.—*Exchange.*

CHLOROFORM VERSUS ETHER ANESTHESIA.

THERE have been volumes written on the advantages of one or the other of these well-known anesthetics and each has its ardent advocates. The weight of evidence seems now to rest with those who claim that ether is less dangerous. Both produce successful anesthesia but the margin of safety with chloroform seems less than with ether.

Burge* has been doing some work which seems to shed light on this question. It is known that during anesthesia acid bodies are formed. Also chloroform is very toxic to the liver cells. Burge found that by determining the amount of the oxidizing ferment, catalase, in the blood he could show that while both ether and chloroform reduced the catalase, the reduction from ether was a gradual one over 90 minutes of time and amounted to 54% loss, whereas the reduction due to chloroform was sudden during the first fifteen minutes and equaled 65% at the end of 90 minutes. Catalase is known to be produced in the liver, so that one would naturally expect a hepatotoxic substance to reduce the catalase. This Burge has shown to be the case.

Anesthesia then is associated with decreased oxidative processes in the body. "In fact it is probable that the cause of anesthesia is to be found in the decrease in the oxidative processes particularly of the nervous system produced presumably by the destruction of the catalase by the anesthetic. The specific action of anesthetics on the nervous sys-

tem, according to this hypothesis, is due to the greater solubility of the lipoids or fat-like substances of nervous tissue which facilitates the entrance of the narcotic into the nerve cell and then exposes the contained catalase more directly to the destructive action of the drug."

NEWSPAPER MEDICAL ADVERTISING.

NOWHERE is the saying "Let not thy right hand know what thy left hand doeth" more apparent than in some supposedly reputable newspapers. There seems to be a silent compact on the part of the editorial and advertising managements of many newspapers not to interfere with each other's prerogatives. Consequently we see a daily paper full of objectionable medical ads. so worded as to catch the unwary, and an editorial condemning the medical ads. and eulogizing the forces which are struggling to clean the newspapers.

Papers pride themselves on their circulation in the homes and yet they make no honest effort to see that what they place in the homes is clean. Certain metropolitan dailies have absolutely refused medical ads. They have censors who pass on all such applications for advertising space. A large daily paper printed in English is now a sheet which offends no one. Unfortunately this cannot be said of our Milwaukee and other Wisconsin papers.

For our part there is no essential difference in forging a check or fleecing a victim on a false mining scheme, and fleecing the ill person by false promises of cure. Mostly the victims of the medical ads. can ill afford to part with their money. Were it not for the venal co-operation of the newspapers in selling their advertising space to the medical fakers, the quacks would have to go out of business. Fear of losing the dirty blood money makes newspapers accept the quack ads. Yet it is abundantly proved by the experience of the large dailies that no money is lost by refusing such ads. On the contrary clean advertising has so increased that it has more than made up for the loss of the fake medical ads.

We often wonder how long it will be before the Wisconsin papers follow in the wake of other newspapers in refusing to accept the medical ads. They are truly *participes criminis* in a nefarious business

*Burge, W. E., Science—Dec. 21, 1917.

however much they might deny the accusation. We will admit that the most objectionable and the nastiest of the quack ads. no longer are found in our daily papers. Some good was accomplished in the crusade against human blood-suckers. Now those ads. are only to be found in papers printed in foreign languages.

This raises an interesting question. Why are the papers in this country now permitted to use any other language than English? This however is not strictly germane to the matter in hand. The actual fact is that it is through the medium of these foreign-language papers that the lost-manhood type of quack still flourishes.

But still the query bobs up. It is a punishable crime to separate well people from their money in fake business schemes, then why is it not a greater crime, punishable with greater severity, to separate an ill person from his money by means of a fake scheme? Does anyone hear the green-goods men cry out that the merchants are jealous because they can't make the large returns which the crooks make? Not so that anyone has heard it.

Has anyone heard the quacks accuse the medical profession of jealousy because they (the quacks) make so much more money than the honest members of the medical profession? Surely, that's the reason why the doctors want to put the quacks out of business.

Possibly in this day of rapid changes in the old order, we may be able to get the quacks by forcing all newspapers to clean up their advertising columns. This is a consummation devoutly to be wished and one worth fighting for especially now that we have our fighting blood up.

AMERICAN SALVARSAN.

GRADUALLY but surely the Government is releasing the monopoly patents held by Germany on drugs and inventions. For the physicians and the victims of syphilis the most important recent announcement is contained in the Dec. 7 Public Health Reports.

"The Federal Trade Commission on November 30, 1917, issued orders for licenses to manufacture and sell the product heretofore known under the trade names of 'salvarsan,' '606,' 'arsenobenzal,' and 'arsaminol,' to the following-named manufac-

turers: Dermatological Research Laboratories, of Philadelphia; Takamine Laboratory (Inc.), of New York; and Farbwerke Hoechst Co. (Herman A. Metz Laboratory), of New York.

"The drug will be manufactured and sold under the name of 'arsphenamine'."

The manufacturers must comply strictly with certain comprehensive rules and regulations promulgated by the Public Health Service. These have to do with the arsenic content, the toxicity, the package, labeling, etc.

This announcement should bring joy to us all. It ends a fight waged by physicians singly and in authorized bodies to procure relief from the situation created by the holding of patent rights by the Germans.

Although the Dermatological Research Laboratories made a product the same as salvarsan, Herman A. Metz, now licensed to make the drug, fought the introduction of this product and also forced the maximum price to hold for a substance which it was admitted could be marketed at one-third to one-fourth of the price. It was an outrageous piece of German effrontery. Now we can get all the arsphenamine we want at a price within reason and a probability of a further reduction in price. Let us not forget Herman A. Metz. *Verbum sapienti sufficit.*

NURSING DEPARTMENT DISCONTINUED.

The Nursing Section which has been a part of the Wisconsin Medical Journal for the past year was started as an experiment. As the nurses of Wisconsin have no state Journal it was thought that, by including papers, editorials and news items in the Medical Journal the nurses might be helped and incidentally the distribution of our magazine extended. This has not proved true, however, so the nursing section is to be discontinued.

CORRESPONDENCE

January 2, 1918.

Editor Wisconsin Medical Journal,
Milwaukee, Wis.

DEAR SIR:—

I have just noticed your reference to my name in your editorial on page 256 of the December Journal. I

January 7th, 1918.

was indeed very greatly surprised and astonished,—first, because I have at no time written anything for publication as an advertisement and have never advertised or conducted my business otherwise than along strictly ethical lines.

Secondly, I am most astonished to learn that any man who has the distinguished honor of an editor of the leading medical journal in Wisconsin should take it upon himself to sarcastically refer to any man in good standing in the profession in this state without first ascertaining the facts of which you presume to write.

If it is your desire to pose as a "know all" and willfully injure the character and standing of another practitioner you occupy a position in which you can readily accomplish your purpose. I think the medical men of this state will not approve of your action in this matter.

Had you spoken to me or had you made any attempt to learn the facts before rushing into print you would not have used my name nor would you have referred to me in so undignified and unprofessional a manner.

I shall demand complete retraction of all your statements in your editorial which reflect on my professional standing and an apology for the injury which your editorial intended for me.

For your personal benefit and for the benefit of the profession I would advise that you know what you are talking about before you rush into print again through your editorial columns.

Very truly yours,

W. G. DOERN.

January 2, 1918.

Dr. O. W. Joslin,
Dodgeville, Wis.

DEAR DOCTOR:—

My attention has just been called to an editorial in the December Journal in which the editor refers to me in connection with certain advertisements in some local newspaper.

I have seen none of the advertisements referred to in that editorial but I will say right now that I have at no time given any individual or any corporation the right to use my name in any advertising whatever, nor have I at any time written any testimonial or letter of any kind to be used for publication or for advertising in any manner nor do I approve of such advertising as is referred to in the above mentioned editorial.

Should it appear that my name has been used in connection with such advertising without my knowledge or consent I must insist on full public retraction and reparation for all injuries. My business has always been conducted along legitimate lines and I have no intention of changing to any other methods at this time.

Please send me copy of all advertising you may have done using my name. I have no knowledge of any such advertising except the reference in the editorial in the Wisconsin Medical Journal.

Very truly yours,

W. G. DOERN.

Dr. William G. Doern.
1225 Wells Building,
Milwaukee, Wis.

DEAR DOCTOR:—

I have your letter of the 2nd and carefully note contents.

I can plainly see that you have been given the wrong impression at least as to our intent in the use of your name in connection with our institution.

To begin with, the editor of the Wisconsin Medical Journal in his criticism of us as to our methods of advertising, does not seem to take into consideration certain facts; for example our hospital and sanatorium is a corporation and therefore nothing more nor less than a business firm and as such entitled to advertise. This corporation consists of nearly 300 representative citizens of Iowa County who have their money invested in it and who want to know at all times what is being done and what is necessary to do to make it a greater success. It is my duty as Medical Director and Manager to let them know, and it seems to be most expedient to do this through the local press.

None of our advertising is designed to advertise anything but the institution, although I admit that in connection with it, it must necessarily speak at times of some members associated with it. I do not know that we are doing any different than any other sanatorium in our advertising, except that we are doing such radically progressive and different things than any other in Wisconsin that we must, if we let it be known what we are doing, speak of these things which in the very nature of it, I admit, sounds startling in the extreme. I am not able to understand how any thinking person could think that we could with all the capital we have invested in our institution afford to so misrepresent anything to the public as they would impress the public we are doing. A striking characteristic which seems to be universally true of the medical profession is that they first criticize and condemn, and finally, if ever, investigate. It would stand the Wisconsin Medical Journal well in hand to thoroughly investigate, not only the Bio-Dynamo-Chromatic System of diagnosis, but the other modalities of an equally progressive nature that we are using, if they are honest in their ambition to ever guide the public right. They would thereby save everyone unnecessary trouble and themselves what must result in ultimate embarrassment when they really find out that we are right and they are wrong.

Why do not these *All-Knowing Infallible Judges* challenge me, or at least give me the opportunity to demonstrate that all we have stated in our advertising is true? If within a reasonable length of time they do not offer me this chance in the face of the damage they have already done us, the opportunity shall probably be demanded.

Our desire to protect the public as to the things most beneficial for it is, we think, equally as great as that of the Wisconsin Medical Journal, and now that war has been waged on us, we will give all the opportunity the public should have to see and judge for itself whether

it can derive the most benefit from the old, conservative things in medicine or some of the more recent and thoroughly proven ones.

Now coming to the part that concerns you most vitally, if these "Know-Alls" had taken a second look and had not been quite so hasty to rush into print, they would have noted that to begin with our advertisement did not say that you had given any testimonial nor that you wrote anything. No one has claimed such, and you may further say that we declare you entirely innocent of even knowing that your name was used in connection with our institution in any way. The professional names we used entirely on our own responsibility without consulting any of the men, believing that we were thereby doing good service to the institution and the public and believing that we were not doing any harm at least to the men whose names we mentioned.

I am in New York this week in answer to an invitation sent me to read a paper and give a demonstration in "this Bio business" for one of the Medical Societies of New York County. I am also giving some demonstrations to some of the medical men privately, and it is refreshing indeed after coming out of such a depressing atmosphere as exists in some of the medical zones of Wisconsin to see how enthusiastically the work is being received here.

Regretting that we have indirectly been the cause of giving you any annoyance, and hoping that this lengthy letter may suffice to exonerate you, I beg to remain,

Very sincerely yours,

O. W. JOSLIN, M. D.,

Medical Director, Dodgeville General Hospital.

Jan. 3, 1918.

Dr. W. G. Doern,
Milwaukee, Wis.

DEAR SIR:—

I am in receipt of your recent letter with enclosure and wish to disclaim any animus towards you in the editorial appearing in the Wisconsin Medical Journal. I hold in my hand a full page advertisement from the Dodgeville "Republic" of November 20, 1917. Following a number of testimonials from patients, there is a heading, "What the Medical Profession has to say," and I quote verbatim. Dr. Wm. Doern, Wells Building, Milwaukee, Wisconsin, one of Milwaukee's leading surgeons says, "I have thoroughly investigated the Bio Dynamo Chromatic System of Diagnosis, being used at the Dodgeville General Hospital, and consider it the most startling and scientific advancement yet discovered in the great field of Medicine. The results achieved thereby could not be believed if not seen."

Dated November, 1917.

It was not the purpose of the editorial to malign any one's character or to injure in any way any reputable member of the Medical Profession. I am more than willing to apologize for injuries which you think I have done to you, as I am not in the habit of maliciously slandering anyone.

You say that I should have inquired from you before I mentioned your name. Possibly I should have done so,

but I consulted a number of men before publishing that particular editorial, and no one of them suggested that it was necessary in view of the printed statement of going any further than to take what was printed.

I wish to assure you, doctor, that towards you personally there is absolutely no animus behind anything which was written. It is the principle of the thing that we are fighting, and I think that you will admit with me, that that is a sort of business that should be frowned down upon by the Medical Profession.

I should be very glad to publish this letter as my reply, together with the letter that you wrote me and the letter you wrote to Dr. Joslin. If I do not hear from you within the next few days, I shall presume that I have your consent to publication.

Very truly yours,

L. M. WARFIELD.

NOTE—Dr. O. W. Joslin of Dodgeville is not a member of the State Medical Society of Wisconsin. He *was* a member. All the data giving reasons why he is no longer a member are in the hands of the State Society Officers.

Abuse is at times the subtlest form of flattery.—
Editor.

ABSTRACTS

SURGERY AND DISEASES OF THE MOUTH AND JAWS. A Practical Treatise on the Surgery and Diseases of the Mouth and Allied Structures by Vilray Papin Blair, A. M., M. D., F. A. C. S., professor of Oral Surgery in the Washington University Dental School, and associate in Surgery in the Washington University Medical School. Third Edition. Revised so as to incorporate the latest war data concerning gunshot injuries of the face and jaws. Compiled by the Section of Surgery of the Head, Subsection of Plastic and Oral Surgery, Office of the Surgeon General of the Army, Washington, D. C., with 460 illustrations. C. V. Mosby Co., St. Louis, 1917. Price \$6.00.

A CLINICAL TREATISE ON DISEASES OF THE HEART FOR THE GENERAL PRACTITIONER. By Edward E. Cornwall, Ph. B., M. D., Attending Physician, Williamsburgh and Norwegian Hospitals; Consulting Physician, Bethany Deaconesses Hospital. Formerly Professor of Medicine, Brooklyn Post-Graduate Medical School; Fellow of the American College of Physicians, The American Congress on Internal Medicine, and the American Medical Association; member of the American Therapeutic Society, etc. Rebman Company, New York, 1917. Price \$1.50.

THE PRACTICAL MEDICINE SERIES. Comprising ten volumes on the year's progress in Medicine and Surgery under the general editorial charge of Charles L. Mix, A. M., M. D., professor of Physical Diagnosis in the Northwestern University Medical School.

Volume VIII. PHARMACOLOGY AND THERAPEUTICS. Edited by Bernard Fantus, M. S., M. D., associate professor of Medicine, Subdepartment of Therapeutics, Rush Medical College, Chicago, Ill. PREVENTIVE MEDICINE, edited by Wm. A. Evans, M. S., M. D., LL. D., Ph. D., professor of Preventive Medicine, Northwestern University Medical School. Series 1917. The Year Book Publishers, 608 S. Dearborn St., Chicago, Ill. Price \$1.50.

Volume VII. OBSTETRICS. Edited by Joseph B. DeLee, A. M., M. D., professor of Obstetrics Northwestern University Medical School with the collaboration of Eugene Cary, B. S., M. D., assistant gynecologist, St. Luke's Hospital; Instructor in Gynecology, Northwestern University Medical School. The Year Book Publishers, Chicago. Price \$1.50.

ANNUAL REPORT OF THE SURGEON GENERAL OF THE PUBLIC HEALTH SERVICE OF THE UNITED STATES for the fiscal year 1917. Washington Government Printing Office, 1917.

RADIUM IN CANCER. James Ewing, New York (*Journal A. M. A.*, April 28, 1917), says the most important question for the therapist concerning radium is not how many cases of cancer it has cured, but whether it has any specific action on tumor tissue. On cellular tumor tissue, he claims that its action is selective and specific, in the sense that tumor tissues are from four to seven times as sensitive as normal tissues, and the morphology of the changes in tumor tissue following successful radium application is also specific. He has not seen any such successes occur under any other conditions, and when they are present in undisturbed course, it is possible to recognize a tumor tissue that has been given radium treatment. He describes the epidermoid changes occurring in the cervical canal in cervical cancer from radium use, and says that the best effects are not merely the killing of cancer cells, but the exaltation of a slow and complex process in which stimulation of capillaries in fibroblasts and exudation of lymphocytes are prominent and even essential factors in the healing process, while the tumor cells may be slow to yield their places. Some of the most surprising and satisfactory results follow a single application of radium, though the patient may not show improvement for weeks or months. On the other hand, if repeated, strong applications have caused extensive cicatricial tissue, groups of tumor cells may resist the direct action of radium and be the cause of recurrence. An interesting feature of the healing process is the absence of scar when the dose is properly adjusted. Of the mode of action of radium little is known definitely. It is reasonable to assume that the gamma rays absorbed while traversing the tissues give rise to secondary beta rays, electrons, which act on the cells. From a pathologic standpoint, the observed changes indicate action directly on the tumor cell and especially on its nuclear mechanism, with profound and progressive chemical changes in the nuclear proteins, by the formation of acid products and the absorption of material, probably water. Lazarus-Barlow considers that the absorption of tumor cells affected by radium may establish a true im-

munity against their growth. Ewing mentions the difficulties in the treatment of cancer, from the peculiar conditions unknown in the scientific laboratory. While unwarranted hopes have been raised in the past, he has not found exaggerated statements of its value in recent accredited medical literature. The condition laid down by surgical opinion that radium must be tried out on inoperable cancer is on the whole a wise restriction, especially for beginners. With advanced and inoperable cancer, it has more than justified the hopes aroused by its success in cutaneous tumors. Most experienced workers are, however, not oversanguine of the permanent benefit in advanced cases. Its effects are confined to a limited territory, and the excessive dosage used in some cases has had bad results. He formulates the following indications for the use of radium in inoperable cancer when the sufficient amount of radium is available. "Radium should not be withheld from rapidly growing deep seated and bulky tumors, for the cellular structure of many such tumors is just that most susceptible to the action of large amounts of radium applied at a distance from the skin and over long periods. In those forms of cancer in which operation yields particularly unsatisfactory results, as in the uterus (cervix), prostate, tongue, pharynx, antrum, and in lymphosarcoma, the scope of operability should be reduced and radium treatment preferred or employed in combination with a limited operation. Cautious palliative treatment only is usually the safest limit in efforts to deal with very advanced cases of any type. The untoward effects of overtreatment of inoperable cases may greatly aggravate the patient's sufferings, adding to the original condition severe and prolonged pain, sloughing of tissues, perforation of hollow organs, hemorrhage, infection and general intoxication. It is from such ill advised efforts that much of the current distrust of radium has arisen and not from its proper use in suitable conditions. The combination of radium and surgery has been employed in many clinics with encouraging results in borderline or inoperable cases, and offers an important field of research for the progressive surgeon." As to the treatment of operable cancer, the objections to such should be frankly stated and clearly recognized. "They are, mainly, that all new methods of cancer therapy have inevitably failed, and only the knife has proved reliable; that certain so-called clinically cured cases have relapsed within a few months, and that it is morally unjustifiable to sacrifice the patient's chance for operation for an experiment by any new method. The validity of these objections depends today entirely on the extent to which the ability of radium completely to destroy localized cancer has been demonstrated." It was early shown that radium could eradicate cutaneous cancer, and it is now in many circles the method elected in dealing with rodent ulcer and epidermoid cancer of the skin. In certain cases of basal cell cancer, such as mixed tumor of the salivary glands it may be successful. There are yet, however, many conditions in which skin cancer may be refractory. Among these are recurrences, after operation, cancer following lupus, invasion of bone, location near eye or nasal sinuses. In thin skin over bony promi-

nences, and after repeated ineffectual exposures. In cancer of the cervix uteri, the results of radium treatment have favorably impressed some conservative gynecologists. The literature of radium treatment of uterine cancer is reviewed by Ewing, and he is much impressed by the conclusions of Doppert who reports forty-eight uterine cases and recommends radium for early localized cancer, operation for established or borderline cases, since radium treatment is long and uncertain, and radium in inoperable cases, but if advanced, neither radium nor operation. Since adenocarcinomas are more susceptible to radium and corpus carcinoma tends to spread widely over an accessible mucosa before infiltrating, there seems no good reason for excluding this disease from the benefits of radium treatment after surgical failures. Carcinoma of the rectum can be favorably influenced and sometimes controlled and Ewing mentions the indications in cancers of the lip and tongue where the local difficulties can be overcome. The use of radium in cancer of other regions as a curative or palliative agent are also noticed. The difficulties of the successful use of radium are numerous. Chief among them is the common effort to cure hopeless cases by its caustic effects. The failure to recognize that each case is a problem by itself, the complex physical laws governing its action and the mechanical difficulties in the way are also

noted. A serious objection to its use in advanced cases is found in the failure of long inflamed granulation tissue to heal after the tumor cells have been destroyed. Recurrences after radium treatment have been rather frequent, and he mentions radium intoxication following long exposure in some cases, and considers that it must be chiefly referred to the bacterial complication following considerable necrosis of tissue. The constitutional element in cancer, moreover, cannot be affected by universal action over the body of this locally acting agent, however powerful it is in early cancer. The mental effect of its use is more favorable than that of the knife, and should be considered.

If you desire that a woman shall remain pure and have no desire for men, then take the priapus of a wolf, and the hairs from his eyelids, and the hairs that are under his beard, and burn these all together, and give them to her to drink, she not knowing of it: and then she will desire no other man. And it has been said that when a woman cares not for her own man, then shall the man take of the tallow of goats of middle size, and rub the same upon his member, and thereafter copulate, and she shall have a great love for him, nor desire for any other.—*Albertus Magnus*.

The following are lists of Wisconsin physicians who have been reported on January 1st as being in the Government Service or as having accepted commissions and awaiting call. These lists are necessarily inaccurate and we would greatly appreciate our attention being called to any names which have been omitted or to any names included which should not be. Kindly send corrections to Doctor Rock Sleyster, Secretary, Waupun, Wisconsin.

SERVICE, DEC. 1, 1917.

Aaron, Joe, Milwaukee
 Adamkewicz, L. L., Milwaukee
 Allen, W. E., Sun Prairie
 Amundson, K. K., Cambridge
 Andrew, C. H., Platteville
 Andrews, C. W., Waupaca
 Angell, E. D., Milwaukee
 Aplin, F. W., Waukesha
 Armitage, J. E., Milwaukee
 Axley, A. A., Butternut
 Badeaux, G. I., Spooner
 Bading, G. A., Milwaukee
 Baker, G. R., Tomahawk
 Ballard, J. A., Hayward
 Barnes, Edgar, Ripon
 Barnes, H. T., Pewaukee
 Barrett, E. J., Sheboygan
 Bassler, H. H., Oshkosh
 Bedford, E. W., Sheboygan
 Beeson, H. B., Cornell
 Bellis, G. L., Wauwatosa
 Bennett, L. J., Ft. Atkinson
 Bennett, W. C., Rhinelander
 Bibby, Elias, Milwaukee
 Black, N. M., Milwaukee
 Blanton, S. G., Madison
 Blumenthal, R. W., Milwaukee.
 Boland, J. E., Two Rivers
 Borden, F. R., Plainfield
 Boren, J. W., Marinette
 Bornstein, Max, Milwaukee
 Bowen, R. L., Oshkosh
 Boyden, W. L., Seymour
 Brewer, L. C., Jefferson
 Bruins, D., Milwaukee
 Brunckhorst, F. O., Hortonville
 Bryant, J. R., Wausau
 Burns, H. J., Hudson
 Carter, H. M., Madison
 Cary, L. W., Winnebago
 Christensen, J. W., Sparta
 Cristman, E. S., Alma
 Clarke, Chas. P., Janesville
 Clarke, T. C., Oconto

Clark, W. T., Ft. Atkinson
 Coleman, H. N., Barron
 Combs, C. J., Oshkosh
 Conley, Jas. G., Darlington
 Conley, J. G., Racine
 Conley, J. M., Oshkosh
 Converse, G. L., Webster
 Cooke, Edward P., Milwaukee
 Cooksey, R. T., Madison
 Corcoran, C. J., Milwaukee
 Corr, J. T., Racine
 Cottingham, M. D., Lake Geneva
 Cowan, W. F., Stevens Point
 Crane, Martin C., Osseo
 Critchlow, Chas. A., Milwaukee
 Crowe, N. F., Walworth
 Darby, G. S., Brodhead
 Darling, Frank, Milwaukee
 Dawson, Chas. A., River Falls
 Dean, J. P., Madison
 Decker, C. O., Crandon
 Decker, H. S., Milwaukee
 Dehmel, R. A., Germantown
 DelMarCelle, C. C., Neenah
 Doctor, W. R., Cazenovia
 Dodge, C. H., Clinton
 Douhearty, C. F., Richland Center
 Draper, M. H., Deerfield
 Drlessel, S. J., Barton
 Drill, Alex. A., Princeton
 Ebert, E. C., Milwaukee
 Eck, Gustave E., Lake Mills
 Eggers, H. E., Omaha, Nebr.
 Elliott, Reuben J., National Home
 Elliott, R. S., Laona
 Elvis, E. B., Medford
 Epley, O. H., New Richmond
 Erickson, H. C., Stanley
 Evans, Edward P., S. Milwaukee
 Farrage, J., Breckenridge
 Farrell, A. M., Two Rivers
 Ferguson, F. H., Elroy
 Festerling, E. G., Reedsville
 Fielder, O. A., Sheboygan
 Flitz, E. O., (city not given)
 Fitzgerald, J. J., Eagle

Flancher, L. H., Milwaukee
 Fleming, W. J., Wauwatosa
 Foat, John S., Ripon
 Fowler, P. H., Plain
 Frew, J. W., Milwaukee
 Frawley, W. J., Appleton
 Fritchett, A. F., Franksville
 Fulton, H. A., Eau Claire
 Flynn, L. H., Eau Claire
 Gendron, A. E., River Falls
 Gillette, H. E., Packwaukee
 Gillis, J. P., Deerbrook
 Gleason, C. M., Oconomowoc
 Gosin, F. J., Green Bay
 Gosin, D. F., Green Bay
 Graebner, H. H., Milwaukee
 Grannis, I. V., Menomonie
 Gray, R. H., La Crosse
 Ground, Holland T., Superior
 Gunderson, C. A. S., Madison
 Hafemeister, E. F., North Prarie
 Hager, F. J., Denmark
 Hall, M. W., Mondovi
 Halsey, H. A., Hiles
 Hanley, W. J., Kenosha
 Hansen, J. W., Milwaukee
 Hansen, Wm. C., Racine
 Hanson, E. W., Three Lakes
 Hawley, Franklin M., Bayfield
 Hayes, E. P., Eau Claire
 Hebron, R. A., Cataract
 Heraty, J. E., Bloomington
 Hickey, R. E., Winchester
 Hogan, J. H., Racine
 Hogue, G. I., Milwaukee
 Howell, E. C., Fennimore
 Holmes, B. H., Delavan
 Hudek, D. F., Statesan
 Huff, F. C., Sturgeon Bay
 Hughes, C. W., Winneconne
 Hugo, D. G., Oshkosh
 Hunter, C. M., Stetsonville
 Ivy, Robert H., Milwaukee
 Jenner, A. G., Milwaukee
 Johnson, J. C., Ogdensburg
 Johnson, W. W., Racine

Jones, M. L., Wausau
Joseph, W. A., Hancock
Kampmeier, A. J., Milwaukeee.
Kaysen, Dr., Milwaukee
Kaysen, Ralph, Watertown
Keenan, H. A., Stoughton
Keenan, T. P., Milwaukee
Kelly, D. M., Baraboo
Kennedy, F. H., Greenwood
Keuney, C. J., Milwaukee
Kenney, R. L., Milwaukee
Kerston, E. M., Two Rivers
King, G. F., Green Bay
Knox, E. S., Bowler
Krahn, G. W., Oconto Falls
Kraus, E. T., Sun Prairie
Krygier, A. A., Milwaukee
Kulig, Albert H., Dodge
Larson, G. H., Pewaukee
Lasche, P. G., Richland Center
Lawhorn, C. C., Milwaukee
Lawrence, G. H., Fond du Lac
Leahy, J. D., Milwaukee
Lewis, S. J., Milwaukee
Leifert, W. C., Milwaukee
Lochemes, W. T., Milwaukee
Longley, J. R., Fond du Lac
Loreuz, W. F., Mendota
Mackedon, T. E., Cedarburg
MacLaughlin, H. E., Waupaca
McBeath, N. E., Livingston
McCarthy, H. C., Richland Center
McCarty, M. A., La Crosse
McCarty, A. J., Green Bay
McCormick, Wm. C., Tomahawk
McDill, John R., Milwaukee
McEachern, W. A., Superior
McGinnis, J. E., Green Bay
McNicholas, Leo T., Athens
Menefee, B. F., Montgomery City
Merrill, W. G., Grand Rapids
Mertens, H. G., Bayfield
Meyst, Charles H., Burlington
Midgley, A. E., Whitewater
Miller, D. C., Loyal
Miller, H. C., Whitewater
Miller, Thomas, Oconomowoc

Mitchell, E. J., Brodhead
Mitten, A. A., Milwaukee
Mix, H. C., Green Bay
Monstad, J. W., New London
Moore, L. A., Monroe
Moore, W. N., Appleton
Mueller, W. E., Green Bay
Mulsow, J. W., Two Rivers
Myers, I. A., Cottage Grove
Nause, F. A., (city not given)
Neilson, G. W., Milwaukee
Neilson, N. O., Madison
Nichols, R. M., Sheboygan Falls
Nims, C. H., Oshkosh
Norbohm, D. L. R., Dousman
Oullette, C. J., Oconto
Palmer, J. A., Arcadia
Parker, A. S., Clinton
Parmenter, E. L., Mondovi
Pearson, C. M., Ogema
Pelree, F. J., Cheyenne
Perry, Gentz, Amery
Phillips, L. J., Weyhauser
Podlasky, H. B., Milwaukee
Pomerville, F. X., Grand Rapids
Pope, Frank, Racine
Prefts, W. W., Platteville
Provost, A. J., Oshkosh
Randall, A. J., Kenosha
Randall, G. R., Milwaukee
Reay, G. R., La Crosse
Remer, Wm. H., Chasaburg
Richards, C. A., Rhinelander
Richards, C. W., Reedsburg
Robinson, B. N., Prairie du Chien
Rodecker, R. C., Holcombe
Rose, F., Coleman
Rowe, L. B., Brodhead
Rowley, B. B., White Fish Bay
Rowley, C. C., Winnebago
Ruke, E. A., Boscobel
Russell, F. H., Neenah
Rydell, Chas. B., Superior
Salbreiter, W. P., Racine
Sargeant, H. S., Wauwatosa
Sargent, H. L., Milwaukee
Saylor, H., Merrill

Scantleton, J. M., Sparta
Schlenker, G. H., Gilman
Schiek, I. E., Rhinelander
Schneider, J. F., Oshkosh
Schnetz, L. N., Racine
Schoofs, J. J., Johnsburg
Schoofs, O. P., Johnsburg
Schwartz, A. B., Milwaukee
Schwarz, S. G., Humbird
Scott, J. R., Appleton
Seaman, G. E., Milwaukee
Senn, Geo., De Pere
Shluek, A. J., Manitowoc
Shubert, F., Milwaukee
Simons, N. S., Taylor
Sleyster, Rock, Waupun
Smith, S. M. B., Wausau
Snodgrass, T. J., Janesville
Spencer, Geo. F., Evansville
Squires, C. A., Sheboygan
Stamm, L. P., Milwaukee
Steffen, L. A., Antigo
Stoland, Iver, Eau Claire
Smith, T. D., Neenah
Thompson, A. S., Mt. Horeb
Thompson, R. D., Reedsburg
Towle, Geo. E., Mosinee
Treichler, M. J., Hancock
Treglown, J. H., Livingston
Trobbridge, P. T., Washburn
Troek, M. J., Milwaukee
Tyvand, J. C., Whitehall
Van der Linde, L. A., Wautoma
Van der Ven, J. M., Martell
Vankirk, F. W., Janesville
Vogel, Carl C., Elroy
Watkins, C. W., Oconto
Wedge, Athol H., Waupun
Wheatley, C. I., Milwaukee
Whyte, Wm. F., Madison
Wilkinson, John J., Milwaukee
Wilkinson, M. R., Oconomowoc
Willet, Thos., West Allis
Woodhead, F. J., Merton
Yates, C. A., Bangor
Yates, J. L., Milwaukee

ACCEPTED COMMISSIONS — AWAITING CALL.

Andrews, G. F., La Crosse
Bachinski, L. J., Milwaukee
Baird, J. C., Eau Claire
Beebe, C. M., Sparta
Beffel, J. M., Milwaukee
Bendixen, B. O., Campbellsport
Bentley, J. E., Portage
Berger, A. J., New Holstein
Bolton, E. L., Chilton
Bowman, F. F., Madison
Brazean, G. N., Racine
Brook, J. J., Milwaukee
Brown, C. W., Milwaukee
Brown, G. V. I., Milwaukee
Brown, H. M., Milwaukee
Brown, Robert C., Milwaukee
Buckley, Wm. E., Hartford
Buell, H. A., Prairie Farm
Butler, F. E., Menomonic
Cain, C. L., Elmwood
Campbell, L. A., Clear Lake
Chorlog, J. K., Madison
Conklin, Geo. H., Superior
Cooper, C. A., Norwalk
Dawson, D. L., Rice Lake
de Neven, A. V., Wyocena
Dodd, John M., Ashland
Dierschke, P. C., N. Freedom
Donohue, W. E., Manitowoc
Egan, Wm. J., Hurley
Eflers, J. C., Sheboygan
Evans, Curtis A., Milwaukee
Evans, Edward, La Crosse
Fitzgerald, Geo. M., Fond du Lac
Foerster, Harry R., Milwaukee
Foster, A. M., Racine
Fowler, J. H., Lancaster
France, J. J., Milwaukee
Gavin, S. E., Fond du Lac
Gates, Eugene, Two Rivers
Gilchrist, R. T., Milwaukee
Gillespie, W. W., Milwaukee

Gobar, F. W., Milwaukee
Greenberg, Harry, Milwaukee
Ground, Wm. E., Superior
Harper, C. A., Madison
Harvie, W. D., Oshkosh
Harrison, Geo., Ashland
Hatch, W. E., Superior
Hendrickson, H., Green Bay
Hertzman, C. O., Ashland
Hinrichs, R. G., Ashland
Hitz, H. B., Milwaukee
Hoffman, J. G., Hartford
Hughes, J. H., Dodgeville
Jefferson, H. A., Clintonville
Kauth, J. H., Schleisingerville
Kelly, Chas. D., Blair
Knapp, Edgar J., Rice Lake
Krause, E. T., Sun Prairie
Kyllo, John C., Superior
Lademann, O. E., Milwaukee
Laughlin, T., Winneconne
Lillie, O. R., Milwaukee
Ludden, H. D., Mineral Point
Lundmark, L. M., Ladysmith
Lynch, D. W., West Bend
MacLaughlin, Harry E., Waupaca
McCormick, T. F., Milwaukee
McCrath, E. F., Appleton
McMahon, F. B., Milwaukee
Mehl, Hugo F., Milwaukee
Middleton, W. S., Madison
Murphy, E. R. F., Antigo
Murphy, Wm. T., Waukesha
Nelson, O. A., Park Falls
Nott, Geo. W., Racine
Nuzum, Thos. W., Janesville
Oates, Frank, Fond du Lac
O'Brien, H. N., Darien
Patchen, Geo. W., Manitowoc
Pember, J. F., Janesville
Peterson, G. E., Waukesha
Pierson, P. R., Readstown

Pullen, A. J., N. Fond du Lac
Puls, A. J., Milwaukee
Quinn, Jos. F., Milwaukee
Rantz, W. L., Rosholt
Rice, F. R., Walmouth
Riley, E. A., Park Falls
Roberts, D. W., Milwaukee
Rogers, E. H., Stevens Point
Rogers, Phillip, Milwaukee
Rogers, F. C., Oconomowoc
Rollefson, C. J., Superior
Rueth, J. E., Sun Prairie
Scanlan, P. L., Prairie du Chien
Schaefer, C. O., Racine.
Scheer, G. H., Sheboygan
Schlesselman, G. H., Fond du Lac
Schultz, F. J., West Allis
Senn, Ulrich, Milwaukee
Shockley, H. O., Darlington
Simpson, J. E., Endeavor
Smith, A. D., Gilmanton
Smith, Eugene, Milwaukee
Smith, J. W., Milwaukee
Steenberg, H. S., Milwaukee
Stuesser, C. N., Oconomowoc
Sylvester, Homer, Montfort
Taylor, W. A., Portage
Tharinger, E. L., Milwaukee.
Thompson, F. J., Milwaukee
Thompson, J. B., Wittenberg
Thomson, Wm. J., Portage
Torney, T. G., Monocqua
Tuffey, F. S., Boscobel
Voorus, L. O., Beaver Dam
Walters, F. A., Stevens Point
Weingart, W. F., Milwaukee
Wlesender, A. J., Berlin
Wilkowski, C. W., Chippewa Falls
Wilson, R. S., Milwaukee
Witte, Dexter H., Hartford
Youmans, L. E., Mukwanago

RETURNED FROM SERVICE

Dana, A. C., Fond du Lac
Ford, Wm. B., Milwaukee
Patek, A. J., Milwaukee

Madison, J. D., Milwaukee
Taylor, J. Gurney, Milwaukee
Sykes, L. G., Milwaukee

Egland, Gustaf R., Sturgeon Bay
Ruhland, G. C., Milwaukee

THE STATE MEDICAL SOCIETY OF WISCONSIN

ORGANIZED 1841

Officers 1917-18

G. WINDESHEIM, Kenosha, President
 OSCAR LOTZ, Milwaukee, 1st Vice President
 T. W. NUZUM, Janesville, 2nd Vice President

CARL DOEGE, 3rd Vice President
 ROCK SLEYSER, Waupun,
 Secretary

DANIEL HOPKINSON, Milwaukee
 Ass't Secretary
 S. S. HALL, Ripon, Treasurer

Councilors

TERM EXPIRES 1923
 1st Dist., M. R. Wilkinson Oconomowoc
 2nd Dist., G. Windesheim - Kenosha
 TERM EXPIRES 1918
 3rd Dist., F. T. Nye - Beloit
 4th Dist., W. Cunningham - Platteville

TERM EXPIRES 1919
 5th Dist., W. F. Zierath - Sheboygan
 6th Dist., H. W. Abraham - Appleton
 TERM EXPIRES 1920
 7th Dist., Edward Evans - LaCrosse
 8th Dist., T. J. Redelings - Marinette

TERM EXPIRES 1921
 9th Dist., Joseph Smith - Wausau
 10th Dist., R. U. Cairns - River Falls
 TERM EXPIRES 1922
 11th Dist., J. M. Dodd - Ashland
 12th Dist., D. J. Hayes - Milwaukee

Delegates to American Medical Association

H. M. BROWN, Milwaukee

ROCK SLEYSER, Waupun

C. H. LEMON, Milwaukee

Alternates

W. E. BANNEN, LaCrosse

T. W. NUZUM, Janesville

WILSON CUNNINGHAM, Platteville

Committee on Public Policy and Legislation

EDWARD QUICK, Milwaukee, Chairman

J. P. McMAHON, Milwaukee

L. H. PRINCE, Madison

Committee on Medical Defense

G. E. SEAMAN, Milwaukee, Chairman

S. S. HALL, Ripon

A. J. PATEK, Milwaukee

Committee on Health and Public Instruction

SPENCER BEEBE, Sparta

J. M. BEFFEL, Milwaukee

EDWARD EVANS, LaCrosse

Program Committee

MEDICAL SECTION
 L. M. WARFIELD, Milwaukee, Chairman
 T. S. EVANS, Madison - Secretary

SURGICAL SECTION
 EDWARD QUICK, Milwaukee, Chairman
 DANIEL HOPKINSON - Milwaukee
 Secretary

EYE, EAR, NOSE, THROAT SECTION
 S. S. HALL, Ripon - Chairman
 JOS. BELLIN, Green Bay - Secretary

The Wisconsin Medical Journal, Official Publication

LIST OF EXECUTIVE OFFICERS OF COUNTY MEDICAL SOCIETIES.

County.	President.	Secretary.
Ashland-Bayfield-Iron	M. S. Hosmer, Ashland	C. J. Smiles, Ashland
Barron-Polk-Washburn-Sawyer-Burnett	H. M. Coleman, Barron	I. G. Babcock, Cumberland
Brown-Kewaunee	I. E. Levitas, Green Bay	E. G. Nadeau, Green Bay
Calumet	Wm. Schmitz, School Hill	E. L. Bolton, Chilton
Chippewa	C. W. Wilkowski, Chippewa Falls	F. T. McHugh, Chippewa Falls
Clark	H. H. Christofferson, Colby	E. L. Braddury, Neillsville
Columbia	O. O. Force, Pardeeville	A. F. Schmeling, Columbus
Crawford	C. B. Lumsford, Gays Mills	J. McDowell, Soldiers Grove
Dane	L. H. Prince, Madison	W. H. Sheldon, Madison
Dodge	F. T. Clark, Waupun	A. E. Bachhuber, Mayville
Door	H. C. Sibre	T. C. Proctor, Sturgeon Bay
Douglas	R. C. Smith, Superior	John Baird, Superior
Dunn-Pepin	A. F. Heising, Menomonie	G. C. Nedry, Menomonie
Eau Claire	R. F. Werner, Eau Claire	J. E. B. Ziegler, Eau Claire
Fond du Lac	G. B. McKnight, Fond du Lac	F. M. McGauley, Fond du Lac
Grant	M. B. Glasier, Bloomington	J. C. Betz, Boscobel
Green	W. B. Nagli, Monroe	L. A. Moore, Monroe
Greue Lake-Washara-Adams	G. E. Baldwin, Green Lake	J. A. Wiesender, Berlin
Iowa	G. H. McCallister, Avoca	J. R. Hughes, Dodgeville
Jefferson	F. C. Morris, Ft. Atkinson	H. C. Leicht, Lake Mills
Juneau	Brand Starnes, Mauston	A. T. Gregory, Elroy
Kenosha	T. W. Ashley, Kenosha	J. F. Hastings, Kenosha
La Crosse	R. E. Flynn, La Crosse	J. Rosholt, La Crosse
Lafayette	J. C. Hubenthal, Belmont	H. O. Shockey, Darlington
Langlade	M. J. Donohue, Antigo	J. C. Wright, Antigo
Lincoln	H. G. Hincley, Merrill	D. B. Reinhart, Merrill
Manitowoc	J. F. Pritchard, Manitowoc	Louis Falge, Manitowoc
Marathon	W. E. Zilisch, Wausau	E. E. Butler, Wausau
Marinette-Florence	H. F. Schroeder, Marinette	Luella E. Axtell, Marinette
Milwaukee	G. H. Feliman, Milwaukee	Daniel Hopkinson, Milwaukee
Monroe	A. R. Bell, Tomah	Spencer D. Beebe, Sparta
Oconto	C. W. Stoetting, Oconto	T. C. Clarke, Oconto
Oneida-Forest-Vilas		E. R. Boyer, Rhineland
Outagamie	G. A. Ritchie, Appleton	M. E. Rideout, Appleton
Ozaukee	Geo. F. Savage, Port Washington	Henry M. Katz, Cedarburg
Pierce	W. A. Lumley, Ellsworth	R. U. Cairns, River Falls
Portage	D. N. Alcorn, Stevens Point	F. A. Marrs, Stevens Point
Price-Taylor	W. E. Ellis, Dunbar	G. C. Wichman, Rib Lake
Racine	G. W. Nott, Racine	
Richland	C. F. Dougherty, Richland Center	Gideon Benson, Richland Center
Rock	T. W. Nuzum, Janesville	E. B. Brown, Beloit
Rusk	Julian C. Baker, Hawkins	L. M. Lundmark, Ladysmith
Sauk	F. D. Hulbert, Reedsburg	Roger Cahoon, Baraboo
Shawano	J. B. Gordon, Shawano	W. H. Cantwell, Shawano
Sheboygan	Otho Fiedler, Sheboygan	C. N. Sonnenburg, Sheboygan
St. Croix	B. Kunny, Baldwin	O. H. Epley, New Richmond
Trempealeau-Jackson-Buffalo	G. F. Stack, Independence	C. F. Peterson, Independence
Vernon	J. K. Schreiner, Westby	F. E. Morley, Viroqua
Walworth	M. D. Cottingham, Lake Geneva	Edward Kinne, Elkhorn
Washington	H. F. Weber, Newburg	A. H. Heidner, West Bend
Waukesha	G. E. Peterson, Waukesha	
Waupaca	Fremont Chandler, Waupaca	
Winnebago	J. W. Lockhart, Oshkosh	E. H. Hunt, Oshkosh
Wood	Ed. Hougen, Grand Rapids	W. M. Ruckie, Grand Rapids

SOCIETY PROCEEDINGS

ASHLAND-BAYFIELD-IRON COUNTY

Ashland-Bayfield-Iron County Medical Societies met for their annual meeting at the Elks Club House, at Ashland, on December 21. After the banquet the annual meeting was held, and Dr. M. S. Hosmer, Ashland, was elected president for the coming year. Dr. C. J. Smiles was elected secretary and treasurer.

CALUMET COUNTY

Meeting was held at Forest Junction on November 19th at the Hotel Thomas. The subject of State Medical Defense was discussed. The Society moved that those who wished the defense could pay the fee, while those who did not wish state defense need not pay.

Dr. F. C. Rinker examined and demonstrated several clinical cases brought by members of the society. After lunch the doctor gave a lecture on "Some recent Developments on Diagnosis and Treatment of Diseases of the Chest." The lecture was excellent.

COLUMBIA COUNTY.

At the recent annual meeting of Columbia County Medical Society held at Portage on December 21, Dr. O. O. Force, Pardeville, was elected president for the coming year.

DANE COUNTY

The Dane County Medical Society held its regular meeting at the Madison Club on Thursday, December 13, 1917. A Trench dinner was served. The members during dinner were given an opportunity to visit while eating. The meeting was a very enjoyable one.

DODGE COUNTY

At the annual meeting held on November 19th, the following officers were elected: president, Dr. F. T. Clark, Waupun; vice-president, Dr. Charles F. North, Beaver Dam; secretary-treasurer, Dr. A. E. Bachhuber, Mayville; censor, Dr. Von Hengel, Waupun; delegate, Dr. A. E. Bachhuber; alternate, Dr. Elliott, Fox Lake. The meeting was held at Minnesota Junction and was well attended. Dr. J. A. Bach spoke on "Strabismus in the Very Young—Its Care and Treatment."

A. E. BACHHUBER, M. D., *Sec'y.*

EAU CLAIRE COUNTY.

Eau Claire County Medical Society held their monthly meeting on December 18th, at Eau Claire. Dr. R. E. Mitchell read a paper on "Psychiatry and the War." Following this the annual election of officers was held, with the following result: president, Dr. R. F. Werner; vice-president, Dr. J. C. Baird; secretary-treasurer, Dr. J. E. B. Ziegler.

GREEN LAKE-WASHARA-ADAMS COUNTY

The Green Lake-Waushara-Adams County Society met Wednesday evening, December 19th, at 8 o'clock, at Berlin, Wisconsin. Dr. W. D. Stovall, bacteriologist, State Laboratory of Hygiene, gave an illustrated lantern slide lecture on "The Value of Diagnostic Laboratories to the Physician." The lecture was an exceedingly valuable and enjoyable one.

GRANT COUNTY

Grant County Medical Society held its annual meeting at Lancaster, on December 19th. There was a good attendance and an interesting program. The following is the result of the election: president, Dr. M. B. Glasier, Bloomington; vice-president, Dr. Rush Godfrey, Lancaster; secretary-treasurer, Dr. J. C. Betz, Boscobel; delegate, Dr. C. M. Schuldt; alternate, Dr. E. H. Spiegelberg, Boscobel.

JEFFERSON COUNTY

Jefferson County Medical Society met on December 12th, at Jefferson, and elected the officers for the ensuing year: president, Dr. F. C. Morris, Ft. Atkinson; vice-president, Dr. H. C. Leicht, Lake Mills; secretary-treasurer, Dr. Engsborg, Lake Mills.

KENOSHA COUNTY

At the December meeting we had as a guest a young man who had just recently returned from the French front and he left the impression that we were finally going to win but that it was going to be an uphill fight. He had no words but praise for the French and British soldiers but was anxious to see the U. S. troops get busy. As about 45 per cent of the Canadian troops are U. S. citizens and as the Canadian troops have given as good account of themselves as any troops on the front great things are expected of the U. S. army.

The following officers were elected for the coming year: president, T. W. Ashley; vice-president, Frank Lansdowne; secretary-treasurer, J. F. Hastings.

LA CROSSE COUNTY

The annual election of La Crosse County Medical Society resulted as follows: president, Dr. Robert E. Flynn, La Crosse; vice-president, Dr. E. F. Christian, La Crosse; secretary-treasurer, Dr. A. J. Rosholt. The membership of the society is now 40.

MILWAUKEE COUNTY.

Dinner meeting at Hotel Wisconsin. Meeting called to order by the President, Dr. P. F. Rogers, at 9:30 P. M. The reading of the minutes of the previous meeting was dispensed with. Upon motion made, the secretary was instructed under suspension of the By-Laws, to cast the vote of the society for election to membership of the following: Drs. U. E. Sluetter, Charles R. Farnham, Theo. H. Burbach, T. J. Loughlin, Leo J. Drozñakiewicz, Emil

H. Sutter, E. N. Pfeffer, W. H. Melster, John J. Kazmierowski, Thomas A. Boger, T. W. O'Donovan, A. M. Dorr, Edith McCann, Edward Jackson, Vernon A. Chapman, Julius Paul A. Valentine, Leander J. Foley.

Motion was made by Dr. G. H. Fellman, duly seconded and carried, that this society assure the Red Cross Society that its members will gladly render service where needed to the families of those in army service, during the war, when such families are recommended by the Red Cross Society.

Dr. O. Lotz reported a balance of \$86.20, proceeds from the arrangements committee of the State Medical Meeting. Dr. W. H. Washburn made a motion that this fund be turned over to the Red Cross Society to be used as it sees fit; this motion was amended to the effect that this fund be used to send cigars to members in active service; amendment carried, original motion lost. Dr. L. F. Jermain spoke of the work of Marquette University Medical Department and the proposed campaign, to meet with the requirements necessary to receive support from the Carnegie Foundation. Motion was made by Dr. H. M. Brown, duly seconded and carried that a committee of from three to five be appointed by the president to draw up a set of resolutions indorsing the medical department of Marquette University. The committee appointed consisted of Drs. H. M. Brown, William Jobse and R. G. Sayle. The following resolution which they presented was adopted:

Whereas, The Medical Society of Milwaukee County recognizes the efforts and the sacrifices made by the authorities in charge of the medical school, which is a department of Marquette University, and an appreciation of the establishment by it of a school of medicine of which the medical profession, the citizens of Milwaukee, and the people of the state of Wisconsin may well be proud.

Be It Resolved, That the Medical Society of Milwaukee County hereby indorses and approves of the appeal now being or about to be made to the public for procuring the funds necessary to enable the Marquette Medical School to fulfill the requirements for obtaining the fund now offered it by the Carnegie Foundation and thus to make Milwaukee a permanent center of first class medical education.

The secretary's annual report was read.

Annual report of the treasurer was read by Dr. A. R. F. Grob.

The auditing committee, Drs. N. Boorse, N. Hollenbeck, and W. E. Grove, reported this as correct.

The following officers were elected: president, Dr. G. H. Fellman; vice-president, Dr. G. J. Kaunheimer, secretary, Dr. Daniel Hopkinson; treasurer, Dr. A. R. F. Grob; censor, Dr. H. M. Brown; delegates to state society, Drs. Franz Pfister, A. L. Kastner, W. H. Washburn and C. A. Fidler. The retiring president addressed the society. In this address he informed the members of a special Relief Fund that was being presented to the Society by citizens for the families of physicians now in active service. Motion was made by Dr. Kaunheimer,

duly seconded and carried, that the president be authorized to convey to the subscribers the appreciation of this society.

Mr. A. E. Forrest, Vice-President North American Accident Insurance Co., Chicago, Illinois, addressed the Society on "Compulsory Health Insurance." Discussion by Drs. L. F. Jermain, A. W. Gray, G. J. Kaunheimer, Daniel Hopkinson and H. M. Brown.

There were 130 present at the meeting.

DANIEL HOPKINSON, M. D., *Sec'y.*

MARATHON COUNTY

At the meeting of Marathon County Medical Society held on December 22, the officers for 1918 were elected: president, Dr. W. E. Zilisch; vice-president, Dr. E. E. Butler; secretary-treasurer, Dr. F. H. Frey; delegate, Dr. A. B. Rosenberry.

MARINETTE-FLORENCE COUNTY

The Marinette-Florence County Medical Society met on the evening of November 21, at the Hotel Marinette, with Dr. H. F. Schroeder in the chair. After the reading of the minutes the evening was occupied by Prof. H. C. Bradley of the University of Wisconsin. He first gave a formal lecture on the mechanism governing "Atrophy Necrosis and Involution." By request he reviewed the present status of the poison gas which is being developed for purposes of war. As Prof. Bradley is in close touch with the government work of this character, great interest attended his discussion. After a vote of thanks to the speaker the Society adjourned.

OUTAGAMIE COUNTY

The Outagamie County Society held a meeting and banquet at the Y. M. C. A. building at Appleton on Tuesday, December 18th. A supper was served and the members passed a very pleasant and profitable evening.

RACINE COUNTY

The annual meeting of the Racine County Medical Society was held December 6, 1917, at the Commercial Club Rooms, Racine, at eight P. M.

In the absence of the president, Dr. J. H. Hogan, the meeting was called to order by Dr. L. E. Fazen.

Application for membership of Dr. R. C. Thackery, Racine, was presented, and duly referred to the Board of Censors for approval.

Drs. W. C. Hanson, E. Von Buddenbrock, R. O. Peterson, and T. J. McCrory, all of Racine, were elected members of the Society.

The following officers were elected for the ensuing year: President, Dr. G. W. Nott, Racine; vice-president, Dr. J. G. Meachem, Racine; secretary, Susan Jones, Racine; delegate, Dr. J. S. Keech, Racine; alternate, W. A. Fulton, Burlington; censor, W. P. Collins, Racine.

Dr. Charles J. Drucek, of Chicago, delivered an address on the subject of "The Treatment of Hemorrhoids

Under Local Anaesthesia." The lecture was illustrated with pictures and lantern slides.

The attendance was good.

Dr. G. Windesheim, President of the Wisconsin State Medical Society was present.

January 3rd, 1918.

Samuel C. Buchan, M. D.,
846 College Ave, Racine Wis.

DEAR DOCTOR:

At the annual meeting of the Racine County Medical Society, held December 6th, 1917, the following resolutions were adopted on the death of Mrs. S. C. Buchan and Dr. P. H. Smith:

Whereas, Since the opening of the year, death has removed from our ranks our fellow member, Dr. P. H. Smith, and affliction has visited the home of our esteemed co-worker and associate, Dr. Samuel C. Buchan, through the death of his beloved wife and life long helpmate, the following Resolutions are offered to be filed as the records of the Society and published in the appropriate Journal, and

Whereas, By the inevitable laws of being, death has removed from our midst to the great beyond, Lydia, wife of our beloved brother, Samuel C. Buchan,

Therefore, Be It Resolved, That we as a body, express our sincere sympathy to our brother, in the loss of his loved life companion, Mrs. Buchan, died May 14th, 1917, leaving to mourn her loss, her husband and one son. She was a devoted wife and mother, a Christian, public spirited woman, and her death is a great loss, not only to her immediate friends and relatives, but also to the community in which she lived and worked, and her memory will ever be revered by all who knew her.

Further Resolved, That this memorial be preserved in the archives of this Society, and an engrossed copy thereof, presented to Dr. Buchan.

Committee, W. S. HAVEN,
JOHN MEACHEM,
G. W. NOTT.

WAUKESHA COUNTY

At the annual meeting of the Waukesha County Medical Association held on December 7th, at Waukesha Springs Sanitarium, the following officers were elected: president, Dr. G. E. Peterson, Waukesha; vice-president, Dr. F. J. Donnelly, Monches; secretary, Dr. S. B. Ackley, Oconomowoc; censor, Dr. L. M. Youmans, Mukwonago.

WAUPACA COUNTY

A regular meeting of Waupaca County Medical Society was held at Library Hall, New London, November 16th. Papers were presented by Drs. F. J. Pfeiffer and C. A. Borchardt of New London, and Dr. P. J. Christofferson,

Waupaca, and Dr. Daniel Hopkinson, Milwaukee. The following officers were elected for 1918: president, Dr. Fremont Chandler, Waupaca; vice-president, Dr. F. J. Pfeiffer, New London; secretary-treasurer, Dr. G. T. Dawley, New London; censor, Dr. A. C. Borchardt.

GEO. T. DAWLEY, M. D., *Sec'y.*

NEWS ITEMS AND PERSONALS

DR. CAPT. JOHN S. FOAT of Ripon, Wis., M. R. C., is transferred from Camp Fort Riley, Kansas, to Base Hospital, Camp Cody, N. M.

DR. L. B. ROWE, Brodhead, who is with the Army, suffered a fracture of the right leg in a fall from his horse, recently.

DR. W. A. EDWARDS, La Crosse, has received a commission as First Lieutenant, Medical Officers' Reserve Corps.

FIRST LIEUT. NOBLE D. McCORMACK, Medical Reserve Corps, has been ordered from the Howard Medical School, Washington, to duty with Base Hospital No. 22 at Milwaukee.

LIEUT. H. C. MIX, Green Bay, who has been with the Army several months, has been promoted in rank to captain. Capt. Mix is stationed at Montgomery, Ala.

DR. WILLIAM TAYLOR, Portage, has been ordered to report for duty with the 13th Base Hospital, U. S. Army, now at Chicago.

MAJOR GEORGE C. RUHLAND has been honorably discharged from the Medical Reserve Corps, U. S. A., and is back in Milwaukee to resume his duties as health commissioner.

LIEUT. W. W. PRETTS, Platteville, has been made a member of the staff of instructors, and assigned to the work of the Sanitary Department, Fort Riley.

DR. O. R. LILLIE, Milwaukee, has returned from an eight weeks' course, under the Federal Government at the University of Pennsylvania, and will resume his practice until Milwaukee Base Hospital receives its call.

DR. ARTHUR C. DANA, Fond du Lac, who is a First Lieut. Medical Reserve Corps, and was recently stationed at Camp Grant, has received an honorable discharge from service because of ill health.

DR. T. D. SMITH, Neenah, who was wounded in an air raid over an American Base Hospital in France, has been invalided home, and arrived in New York on December 25th.

CAPT. G. L. BELLIS, former superintendent of Muirdale Tuberculosis Sanatorium, Wauwatosa, has just completed equipping and organizing the Edith Wharton Sanatorium, and is now engaged in the establishment of a cantonment for the housing and care of the tuberculous in France.

DR. I. STOLAND, Eau Claire, who recently finished a three months' training course at Fort Riley, has received an assignment as operating surgeon with Evacuation Hospital No. 1.

DR. C. H. CLARK, Beloit, has been assigned to the charge of the hospital at Chanute Field, Rantoul, Ill. All of the sickness and flying school accidents will be under his care.

DR. S. F. SMITH, Edgerton, is suffering from blood poisoning of one of his hands.

DR. E. C. HALLOCK, Kaukauna, recently underwent an operation for ulcers of the stomach, at the Mayo Hospital, Rochester, Minn.

DR. P. J. CHRISTOFFERSON, Waupaca, suffered a broken collar bone and internal injuries in a recent automobile accident.

DR. FREDERICK C. CHRISTENSEN, Racine, underwent an operation for appendicitis recently.

DR. GEO. N. HIDERSHIDE, Arcadia, is seriously ill with pneumonia.

DR. H. O. CASWELL, Ft. Atkinson, is ill at St. Mary's Hospital, Milwaukee.

DR. H. G. OAKLAND, Milwaukee, is defendant in a \$10,000 damage suit, filed by Frank F. Zuehlke, who charges improper care of a fractured leg.

DR. C. H. GOLDEN, Wonebec, was fined \$20 and costs by Judge M. L. Bunnell at Mauston, for repeated failure to file birth certificates within the five days prescribed by law.

The annual meeting of the Wisconsin State Board of Health will be held at Madison on January 3rd. Three of the members are in the military service. They are: Lieut. W. F. Whyte, Watertown, Major Otho Fiedler, Sheboygan, and Major C. H. Richards, Rhinelander.

Bethesda Mineral Spring Company of Wausau, was recently fined \$200 and costs by Judge F. A. Geiger of the Federal Court, for labelling their bottles of water with statements that the water is a cure for dyspepsia, rheumatism, etc.

Merrill, Wisconsin, has an epidemic of small-pox. All of the schools are closed.

Kenosha has an epidemic of diphtheria. Dr. G. Windesheim, chairman of the board of health and Dr. G. H. Ripley are in charge of the situation.

A plan is under way in Iowa to intern all persons having social diseases. A portion of the state's war fund may be used in getting the movement started.

Resolutions asking for the establishment of a bureau in the Milwaukee city health department for handling the problem of social diseases, were adopted at a recent meeting in the office of the health commissioner. An appropriation will be asked for in the next city budget for maintaining the bureau.

The west wing of the Luther Hospital, Eau Claire, is nearing completion, some of the rooms are already occupied.

The city of Sheboygan is planning the establishment of a Children's Free Dispensary.

MRS. ADELAIDE THOMAS, Chicago, will devote 1,000 acres in Price County, Wisconsin, to the uses of wounded convalescent soldiers returning from France. The land is equipped with water and electric power, and already has twenty-five buildings on it.

In a recent report, State Health Officer C. A. Harper submitted a summary of report of birth of all children born deformed or physically defective, since the enactment of Chapter 105, laws of 1917. This statute requires the reporting of all such births to the state board of health within 24 hours after birth, and they shall be reported by that body to the state board of control. Provision is made for institutional care of such children if necessary.

The giving of an anaesthetic, under the direction of a responsible licensed physician, does not require the person to hold a medical license is the opinion of Attorney-General Owen.

The Alabama State Board of Health is calling attention to a number of vacancies in the health service of that state. The Board is greatly crippled by the selective draft. Two places are open for full time health officers, three places for rural sanitation work. For further information address the Alabama State Board of Health.

The Pacific Medical Journal, the oldest journal on the Pacific coast, which has just completed its 60th volume, has been acquired by Dr. William J. Robinson, and will be consolidated with the American Journal of Urology and Sexology. The combined journal will continue under the editorship of Dr. Robinson, and will be published from 12 Mt. Morris Park West, New York City.

"Mentality of the Arriving Immigrant" is the title of a publication issued by the Public Health Service at Washington. The bulletin is of service to examiners of mentally defective persons. It also contains material of interest to the teacher, psychiatrist and public health officer.

As a health index, the Bureau of the Census is publishing each week mortality reports from the largest cities in the United States.

President Wilson on December 6th confirmed the nominations to the twenty-two medical advisory boards of the state. They have been appointed according to medical centers and not according to counties: St. Elizabeth's Hospital, Appleton, Ashland General Hospital, Ashland; Sacred Heart Hospital, Eau Claire; St. Agnes Hospital, Fond du Lac; St. Mary's Hospital, Green Bay; Mercy

Hospital, Janesville; Kenosha Hospital, Kenosha; St. Francis Hospital, La Crosse; University of Wisconsin Clinic, Madison; Marinette and Menomonie Hospital, Marinette; Marshfield Clinic, Marshfield; Marquette University, Milwaukee; Lakeside Hospital, Oshkosh; Wilson Cunningham Hospital, Platteville; St. Mary's Hospital, Racine; St. Nicholas Hospital, Sheboygan; St. Mary's Hospital, Superior; St. Michael's Hospital, Stevens Point; Still Rock Spa, Waukesha; and St. Mary's Hospital, Wausau.

REMOVALS

Dr. E. Weber, Milwaukee, has located at Dundee for the practice of his profession.

Dr. J. A. Jackson, Rudolph, has removed to Mosinee, Wisconsin.

MARRIAGES

Dr. Frank R. Weston and Miss Lillian M. Morris, both of La Crosse, on November 30th.

Dr. W. E. Hatch, Superior, and Miss Caroline Marie Knudson, Duluth, on December 20th.

Dr. R. R. Heim, Marinette, and Miss Elizabeth Anderson, Grantsburg, on December 22nd.

Dr. R. M. Johnson and Miss Ruth McManus, both of Stoughton, on December 25th.

DEATHS

Dr. James McQuillen, Superior, McGill University, Montreal, 1874, died on December 1, aged 67.

Dr. Hugh J. Edwards, Milwaukee, suicided on December 21st. Dr. Edwards was 41 years old, and had lived in Milwaukee for the past fourteen years. He was a graduate of Rush Medical College—class of 1905.

Dr. George H. Webster, Janesville, died on December 4, 1917, aged 57 years. Dr. Webster was born February 28, 1860, at Spring Lake, Michigan, and came to Wisconsin when 12 years old, locating at Oregon. Twenty-five years ago he settled at

Janesville, and lived there up to the time of his death.

Dr. E. H. Dudley, Janesville, died on December 19th, of hemorrhage of the brain, resulting from a fractured skull, received in a fall.

Edward Henry Dudley was born in Evansville, May 12, 1848, and attended Evansville Seminary until the outbreak of the Civil War. In 1864 he enlisted in Company C, and served as a despatch bearer until the close of the war. The following six years he taught school in various Wisconsin cities, and in 1871 entered Rush Medical College, graduating in 1875. He first practiced at Shell Rock, Iowa, and settled at Janesville in 1889.

MEDICAL ADVISORY BOARDS FOR THE STATE OF WISCONSIN.

Medical Advisory Board for the Appleton District—

Jurisdiction: Outagamie, Waupaca, Calumet, Manitowoc.

Medical Center: St. Elizabeth's Hospital, Appleton.

Members:

Chairman, Henry W. Abraham, Appleton.
Norman P. Mills, Appleton.
Everett H. Brooks, Appleton.
Geo. T. Hegner, Appleton.
M. J. Sanborn, Appleton.
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Medical Center: Ashland General Hospital, Ashland.

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Medical Center: St. Agnes Hospital, Fond du Lac.

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Oliver M. Layton, Fond du Lac.
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Sister Francis Claire, Fond du Lac.

Medical Advisory Board for the Green Bay District—

Jurisdiction: Brown, Kewaunee, Door, Oconto, Forest.

Medical Center: St. Mary's Hospital, Green Bay.

Members:

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Warren E. Leaper, Green Bay.
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Jurisdiction: Rock, Green, Jefferson.

Medical Center: Mercy Hospital, Janesville.

Members:

Chairman, Thomas W. Nuzum, Janesville.
Edward B. Brown, Beloit.
Fred T. Nye, Beloit.
Samuel B. Buckmaster, Janesville.
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Medical Advisory Board for the Kenosha District—

Jurisdiction, Kenosha.

Medical Center: Kenosha Hospital, Kenosha.

Members:

Chairman, Gustave Windesheim, Kenosha.
John H. Cleary, Kenosha.
N. A. Pennoyer, Kenosha.
S. F. Miller, Kenosha.
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Medical Advisory Board for the La Crosse District—

Jurisdiction: La Crosse, Trempealeau, Buffalo, Vernon, Crawford, Monroe, Juneau, Adams.

Medical Center: St. Francis Hospital, La Crosse.

Members:

Chairman, Edward Evans, La Crosse.
William E. Bannen, La Crosse.
C. E. Abell, La Crosse.
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Medical Advisory Board for the Madison District—

Jurisdiction: Dane, Columbia, Marquette, Richland, Sauk.

Medical Center: University of Wisconsin Clinic.

Members:

Chairman, Robert Van Valzah, Madison.
Joseph Dean, Madison.
Frederick A. Davis, Madison.
John A. E. Eyster, Madison.
Charles H. Bunting, Madison.
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Medical Advisory Board for the Marinette District—

Jurisdiction: Marinette, Florence.
Medical Center: Marinette and Menomonie Hospital,
Marinette.
Members:
Chairman, Theodore H. Redelings, Marinette.
Maurice D. Bird, Marinette.
James V. May, Marinette.
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Medical Advisory Board for the Marshfield District—

Jurisdiction: Rusk, Taylor, Clark, Jackson, Wood.
Medical Center: Marshfield Clinic, Marshfield.
Members:
Chairman, Karl W. Doege, Marshfield.
Hansford H. Milbee, Marshfield.
William Hipke, Marshfield.
Victor A. Mason, Marshfield.
Roy P. Potter, Marshfield.
Walter G. Sexton, Marshfield.

*Medical Advisory Board for the Milwaukee District
No. 1—*

Jurisdiction: City Divisions Nos. 4, 10 and 13;
County Division No. 1.
Medical Center: Marquette University School of Medicine.
Members:
Chairman, Harry A. Sifton, Wells Bldg.
Louis M. Warfield, 79 Wisconsin.
Samuel G. Higgins, Wells Bldg.
Errol V. Brumbaugh, City Hall.
Richard Dewey, Wauwatosa.
Harry Cohn, Wauwatosa.
Emerson A. Fletcher, 128 Wis. St.
Fred J. Gaenslen, 141 Wis. St.

*Medical Advisory Board for the Milwaukee District
No. 2.*

Jurisdiction: City Divisions Nos. 1, 2, 3, 6, 7, 9 and
15.
Medical Center: Marquette University School of Medicine.
Members:
Chairman, Alfred W. Gray, Wells Bldg.
Horace M. Brown, 79 Wisconsin St.
William E. Grove, Wells Bldg.
Daniel F. Hopkinson, 1008 Third St.
Henry V. Ogden, Goldsmith Bldg.
Edward Quick, Wells Bldg.
Otho Foerster, 128 Wisconsin St.

*Medical Advisory Board for the Milwaukee District
No. 3.*

Jurisdiction: City Divisions Nos. 5, 8, 11, 12, and
14; County Division No. 2.
Medical Center: Marquette University School of Medicine.
Members:
Chairman, Louis F. Jermain, Majestic Bldg.
Wilbur L. LeCron, 141 Wisconsin St.
Claude S. Beebe, 173 Wisconsin St.
Edward F. Barta, 1720 Walnut St.
Frank C. Studley, 898 Summit Ave.
E. W. Bentzein, 420 E. North Ave.
Albert H. Purdy, 307 Grand Ave.
Oscar Lotz, Majestic Bldg.

Medical Advisory Board for the Oshkosh District—

Jurisdiction: Winnebago.
Medical Center: Lakeside Hospital.
Members:
Chairman, F. Gregory Connell, Oshkosh.
Frank Brockway, Oshkosh.
Ernest A. Hunt, Oshkosh.
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Geo. M. Steele, Oshkosh.

Medical Advisory Board for the Platteville District—

Jurisdiction: Grant, Iowa, LaFayette.
Medical Center: Wilson Cunningham Hospital, Platteville.
Members:
Chairman, Wilson Cunningham, Platteville.
James Oettiker, Platteville.
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Medical Advisory Board for the Racine District—

Jurisdiction: Racine and Walworth.
Medical Center: St. Mary's Hospital, Racine.
Members:
Chairman, J. S. Keech, Racine.
L. E. Fazen, Racine.
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Walter S. Haven, Racine.
Emil L. Tompach, Racine.
P. T. Van Arnum, Racine.

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Jurisdiction: Sheboygan and Ozaukee.
Medical Center: St. Nicholas Hospital, Sheboygan.
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George H. Scheer, Sheboygan.
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Medical Advisory Board for the Superior District—

Jurisdiction: Douglas, Burnett, Washburn.
Medical Center: St. Mary's Hospital, Superior.
Members:
Chairman, William E. Ground, Superior.
Luther A. Potter, Superior.
R. C. Smith, Superior.
William Strasser, Superior.
Herbert J. Orchard, Superior.
Geo. Saunders, Superior.
B. W. Giesen, Superior.

Medical Advisory Board for the Stevens Point District—

Jurisdiction: Portage.
Medical Center: St. Michael's Hospital, Stevens Point.
Members:
Chairman, John W. Coon, Stevens Point.
Franklin E. Walbridge, Stevens Point.
David N. Alcorn, Stevens Point.
Wm. W. Gregory, Stevens Point.
Ellietson H. Rogers, Stevens Point.

Medical Advisory Board for the Waukesha District—

Jurisdiction: Waukesha.
Medical Center: Still Rock Spa Sanitorium, Waukesha.
Members:
Chairman, Byron M. Caples, Waukesha.
Albert J. Hodgson, Waukesha.
George E. Peterson, Waukesha.
William H. Catway, Waukesha.
William E. Nicely, Waukesha.

Medical Advisory Board for the Wausau District—

Jurisdiction: Marathon, Shawano, Lincoln, Langlade, Oneida.
Medical Center: St. Mary's Hospital, Wausau.
Members:
Chairman, Joseph Smith, Wausau.
David T. Jones, Wausau.
Lee M. Willard, Wausau.
William E. Zilisch, Wausau.

BOOK REVIEWS

IMPOTENCE AND STERILITY, with Aberrations of the Sexual Function and Sex-Gland Implantation. By G. Frank Lydston, M. D., D. C. L., formerly professor of the Surgical Diseases of the Genito-urinary Organs and Syphilology in the Medical Department of the State University of Illinois, member of the American Urological Association, Fellow of the American Medical Association, Member of the Society of Authors, London, England, etc. The Riverton Press, Chicago, 1917. Price \$4.00.

The author's belief that there is room for still another monograph on diseases and aberrations of the sex function, has led him to take advantage of the opportunity and to present his views and theories together with a few cases of sex implantation in book form, giving as an additional reason that the medical press alone cannot be depended upon for credit for original work.

This book is a compilation of many of the ideas which we have seen in various works on Psychiatry, Neurology and Medicine, with their discussion by the author and his added ideas on sex-gland implantation.

HISTORY OF MEDICINE. Suggestions for study and Bibliographic Data, by Fielding H. Garrison, A. B., M. D., Principal Assistant Librarian, Surgeon General's Office, Washington, D. C. Second edition, revised and enlarged. Octavo of 905 pages with many portraits. W. B. Saunders Company, Philadelphia and London, 1917. Cloth, \$6.50 net; Half Morocco, \$8.00 net.

An almost instinctive perception of historical values, the efficiency that is the result of what must have been a colossal monument of study and investigation, the advantage of an almost cloistered life among the treasures of the Library of the Surgeon-General's office, at Washington, a style that is not only pleasing but also convincing, all these have enabled Dr. Garrison to produce a book upon the History of Medicine that should be one of the valued possessions of every physician.

Not only is it so arranged as to be of the greatest service to the reader seeking pleasant relaxation from the daily grind of practice, but as well it furnishes to the investigator and to the writer of articles upon Medicine and cognate subjects, an encyclopaedic accumulation of important facts in regard to the beginnings of things relating to the investigative side of medical culture, and these things so well indexed as to be immediately available.

The tendency of medical teaching during the last decade has been in the direction of approaching the subject to be taught, from the evolutionary and historical side. This book of Dr. Garrison, for the purposes of the teacher, is beyond value, placing, as it does, the prominent facts in regard to the developmental side of Medicine and medical origins within the immediate reach of teachers, writers and those who but seek for the romantic side of the story of the development of the medical profession. The arrangement of the book is beyond criticism, the additions, particularly those relating to the Medieval period, have made the book a finished work in so far as a history of any subject can be conclusive. The hundreds of biographical sketches of the great men in medicine, of the last two hundred years, should be of the greatest consequence to the student of medicine as well as to those seeking immediate recollection of things learnt, and partially forgotten.

There has been in recent years a notable trend among physicians toward the study of the history of medicine. For every practitioner desiring a better knowledge of the events in medicine, at any time in the years that are passed, this book of Dr. Garrison will prove a most valuable guide and friend.

H. M. B.

The Wisconsin Medical Journal

Volume XVI

MILWAUKEE, FEBRUARY, 1918

Number 9

ORIGINAL ARTICLES

A PLEA FOR MORE THOROUGH OPERATIONS ON THE BILIARY TRACT.*

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CHICAGO, ILL.

*Read at the Annual Meeting of the Wisconsin State Medical Society held at Milwaukee, October 3, 1917.

When we stop to consider that the first operation on the biliary tract was performed only thirty years ago, it is very gratifying to note the rapid development of this special field of surgery. Operative interference at one time consisted only in simple exploration of the gall bladder with or without drainage and an occasional opening of the common duct when definite symptoms of obstruction like jaundice were present. Since this early period in the history of the subject, we have made rapid advances chiefly as the direct result of a careful study of the pathological changes caused by biliary infection. We have learned that the finding of calculi at operation is not the only confirmation of the diagnosis of gall bladder or bile duct disease hence it is a wise precaution on the part of the surgeon to explain this fact to the physician with whom the case is seen in consultation and in turn to the patient if thought advisable. The time has passed when we need to feel chagrined not to have found calculi, because we now consider them only as one of the more palpable evidences of biliary infection but not the only one. The progressive surgeon of today must be thoroughly acquainted with the pathological changes in the gall bladder, bile ducts, liver and pancreas, which are due to biliary infection. The work of Rosenow, Aschoff, Ehrhardt and others has greatly cleared up the reason why simple drainage of the gall bladder is apt to be unsatisfactory and so often requires later removal of the organs. The microorganisms first localize in the wall of the gall bladder and then cause such infiltrative changes that each recurrence of the infection results in thickening and loss of elasticity of the wall

of an organ whose function requires muscular activity and power of distensibility of its walls. We have learned that the crypts of Luschka not only act as reservoirs of infection with expulsion of contents, acting as one of the causes of recurrent attacks, but that calculi (Fig. 1) are formed in them and extruded from time to time into the lumen of the gall bladder. A gall bladder which has lost its power of contractility as the result of



FIG 1.

Section of gallbladder wall showing crypts of Luschka; cholesterol calculi in process of formation.

chronic inflammatory thickening of its walls favors stagnation of its contents and should be removed if the condition of the patient and the skill of the operator permits. We have also learned that there is a most intimate relation between gall bladder infection and both acute and chronic pancreatitis through the fact that the lymphatics of the gall bladder and bile ducts (Fig. 2) drain into those of the pancreas. Therefore no exploration of the biliary tract should be considered as complete unless the operator has obtained information by palpation as to the size and extent of induration of the pancreas, and he should also know that there is a direct causal connection between acute pancreatitis and gall bladder infection, and that the operative treatment of the former is not as hopeless as was formerly thought.¹

¹See the excellent results obtained by Deaver (*Jour. A. M. A.*) and Linder (*Jour. A. M. A.*, Vol. 69, Sept. 1, 1917).

There are two more of the recent advances in this special field of surgery to which I wish to direct attention. First we have learned that we erred in believing that the diagnosis of common or hepatic duct calculi depended upon the presence of constant or intermittent jaundice. *In about 20 per cent. of all cases, calculi are present without giving rise to the symptoms hitherto considered pathognomonic of this localization.*² It is only by a thorough exploration of the common and hepatic ducts when certain indications are present that we can find these calculi, even though they cannot be felt by our routine method of palpating

viz., the finding of hundreds of calculi in the bile ducts within the liver (Intrahepatic cholelithiasis), is now known to be a factor to be considered when we have recurrence even after drainage and removal of calculi from the common duct. These intrahepatic crystalline formations may be floated down stream from the liver into the common duct and cause recurrences which are beyond our control.

When we come to look over the various causes of recurrences following our operative interference upon the biliary tract we find that it is best to divide them into true and false recurrences.

Causes of True Recurrence. 1. Reformation of calculi in the gall bladder: (a) due to recurrence or persistence of infection, and (b) due to reformation of calculi (Fig. 1) in the crypts of Luschka.

2. Reformation of calculi in the common, hepatic, or intrahepatic ducts as the result of recurrence or persistence of infection.

3. Reformation of calculus in stump of cystic duct.

4. Reformation of calculus around silk ligature.

Of these, the last named does not occur at the present time, but there are reports of formation of calculi around ligatures or sutures of this material when it was employed in the early days of gallstone surgery.

In the second group I believe that we can eliminate all except intrahepatic calculi, because the majority of the calculi found at secondary operations on the hepatic or common ducts are now believed to have been overlooked³ at the primary operation and really belong under false recurrences.

It is impossible at the present time to express an opinion as to whether intrahepatic calculi when they give rise to recurrence symptoms belong to the true recurrence group, i. e., are newly formed as the result of recurrence or persistence of the original infection, or are, in reality, present in such large numbers and so widely disseminated within the hundreds of intrahepatic bile ducts that it is beyond human skill to obtain all of them after even prolonged common duct drainage. The

Relation of Lymphatics of gallbladder draining into those of pancreas.

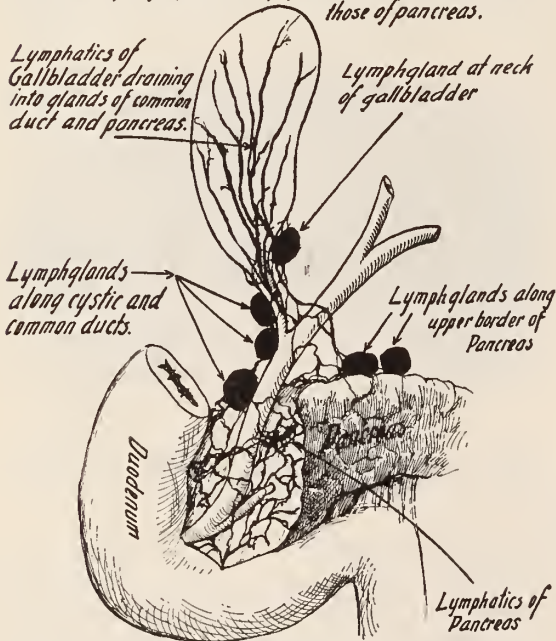


FIG. 2.

Relation of lymphatics of gallbladder and common duct to those of pancreas.

the supraduodenal portion of the bile ducts. In still another direction has the surgeon been aided by the studies of the pathologist. We have learned that infection in the innumerable radicles of the bile ducts lying within the liver itself can give rise to the clinical picture termed cholangitis (chills, fever, etc.) which will persist even in spite of prolonged drainage of the gall bladder or even of the common duct and be the cause of recurrent symptoms after operations. Finally, what was formerly thought to be a pathological curiosity,

²"Overlooked Common Duct Stones," Journ. A. M. A., 1917, 68, 968; "The Silent Common Duct Stones," Medicine and Surgery, 1917, 1, 507; Surgical Clinics of Chicago, Vol. 1, No. 3, August, 1917.

³See article by author on "Overlooked Common Duct Stones" in Jour. Amer. Med. Assoc., March 31, 1917, Vol. 68.

whole subject of intrahepatic cholelithiasis is still in the early stages of evolution from the clinical standpoint, the only articles of importance being those of Beer and Lewisohn quoted in my article.³ (Fig. 2.)

Causes of False Recurrence. The false recurrences are best divided as follows:

1. Calculi in the gall bladder, common, hepatic or intrahepatic bile ducts, which were overlooked or impossible to find (intrahepatic) at the previous operation.

2. Adhesions, especially (a) to the abdominal wall, such as occur after the older method of drainage of the gall bladder, in which the fundus was sutured to the parietal peritoneum; (b) to adhesions of the stomach or duodenum to the gall bladder after cholecystotomy or of the same viscera to the liver after cholecystectomy.

3. Chronic pancreatitis. The close lymphatic relation of the biliary tract to the pancreas is referred to later under diagnosis.

4. Carcinoma of head of pancreas. This may have been present but overlooked at the primary operation.

5. Persistence or recurrence of infection: (a) in the gall bladder (especially frequent after simple drainage); (b) in the common, hepatic and intrahepatic bile ducts. In the last named the infection may persist or recur as a chronic catarrhal or even suppurative cholangitis.

6. New gall bladder formed in dilated stump of the cystic duct after cholecystectomy⁴ as also reported by Floercken⁵.

7. Stricture of cystic, common, or main hepatic ducts.

⁴We have just completed a series of experiments which attempt to imitate the conditions left after the ordinary method of performing a cholecystectomy in the human being. These experiments have been performed upon dogs and confirm the observations of Von Haberer published in 1905, viz., that if the gall bladder is removed at the junction of the organ with the cystic duct, the latter will dilate to form a new gall bladder. In our experiments, which will be published shortly, we have found that this new formed gall bladder will attain the size of a navy bean within two weeks and gradually enlarge until at the end of several months it is about the size of a hazel nut. This experimental research demonstrates the fact that it is necessary to remove the cystic duct close to the common duct unless adhesions prevent our doing so.

8. Internal or external biliary fistulae.

9. Contraction of the ampulla of Vater.

10. Mistakes in diagnosis. The case may originally have been one of gastric or duodenal ulcer, hysteria, tabes with visceral crises, or even a spinal tumor.

11. Pancreatic calculus.

The causes of recurrence after operations on the biliary tract are to a great extent within the control of the surgeon as well as of the medical men who refers the case to him, but to a certain degree they are uncontrollable. By the controllable factors I mean that our medical friends are very apt to send these cases for operation when infection has caused such changes, not only in the gall



FIG. 3.

Lymphatics of lower bile tract.

bladder wall itself, but also in the entire biliary tract, that simple drainage or removal of the gall bladder even when combined with drainage of the common duct does not suffice to enable one to gain the upper hand over an infection which has extended into the hundreds of radicles of the bile ducts lying within the liver itself.

Amongst the uncontrollable causes the most striking analogy is found in calculous disease of the kidney. We are beginning to find that about 15 to 20 per cent of the cases in which we have removed a calculus from the kidney, one or more calculi reform. This is due to a combination of infection plus a change in metabolism which favors the deposit of crystalline substances around a bacterial nucleus. Experience has taught the surgeon to be guarded in his prognosis in such cases

⁵Deut. Zeit. f. Chir., 1912, 113, p. 604.

and the tendency is to do a primary nephrectomy whenever destruction due to the presence of the

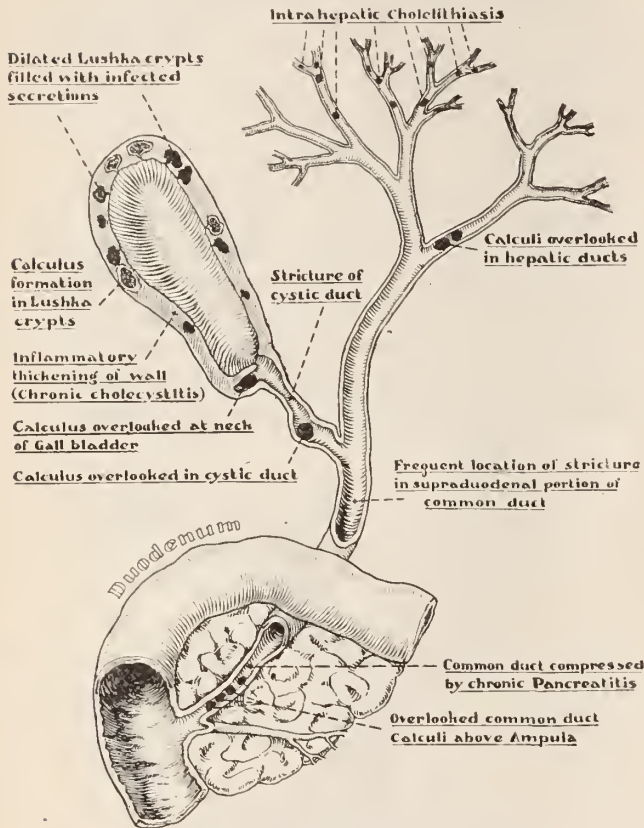


Fig. 4—Diagrammatic representation of the more frequent causes of recurrence after operations on the biliary tract.

calculi is sufficiently advanced to lead the surgeon to fear recurrence by simple pyelotomy or nephrolithotomy. Conditions in the biliary tract are only different anatomically. We have only one liver instead of paired organs to deal with, and although we may have removed the gall bladder and cystic duct or even removed calculi and drained the common and hepatic ducts, yet there is this uncontrollable factor of infection plus deposit of crystalline material which continues to take place in the remaining bile passages. Such a condition gives rise to symptoms of cholangitis, i. e., infection of the intrahepatic bile passages. Bruning has recently called attention to the fact that a cholangitis can cause the same symptoms (chills, fever, sweats, icterus, etc.) even though no calculi be formed.

When we reflect upon the intimate relation between the lymphatics of the lower bile tract and the pancreas (Fig. 3) we can readily see that this added factor of pancreatic lymphangitis resulting in a chronic pancreatitis, is another uncontrollable factor which explains a certain percentage of our

unsatisfactory results, because the indurated enlarged pancreas obstructs the common bile duct (Fig. 4).

Attention was directed in several of my recent articles⁶ to the fact that we are very apt to overlook calculi lying in the common and hepatic ducts because we are usually content with simply palpating that portion of the common duct which lies above the duodenum and when we can not feel any calculi here we feel satisfied that none are present in the common duct. I mean that the average surgeon, even one of considerable experience, at the present time is satisfied when he drains a gall bladder and removes calculi contained therein or even when he extends his indication so as to remove a gall bladder showing evidences of chronic cholecystitis. As a rule the surgeon feels that his task is completed unless there have been symptoms present such as icterus which have been hitherto considered as especially characteristic of stones in the common and hepatic ducts.

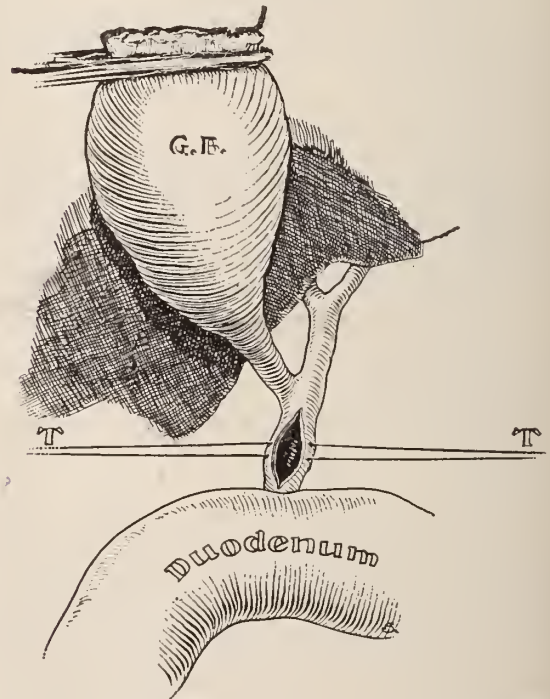


Fig. 5—Supraduodenal choledochostomy. Edges of incision in common duct pulled apart by traction sutures (T) preliminary to exploration of common and hepatic ducts.

In my article on Overlooked Common Duct Calculi and a more recent one⁷, I have reported three

⁶"Overlooked Common Duct Stones," Jour. A. M. A., 1917, 68, 968; "The Silent Common Duct Stone," Medicine and Surgery, 1917, Vol. 1, 5, 507; Surgical Clinics of Chicago, August, 1917.

⁷Surgical Clinics of Chicago, August, 1917.

cases which had been previously operated upon by others where palpation had been negative at the first operation and in which I found calculi at the second operations which had been overlooked at the first. In other words, I wish to make a plea not for bold and irrational intervention, but for at least a consideration of the possibility of the presence of calculi in the common duct (a) when many calculi are present in the gall bladder; (b) when the common duct is thick walled and dilated; (c) when there are symptoms of cholangitis in the form of icterus, chills, etc.; and (d) when the pancreas is markedly hard and indurated, even though palpation of the common duct is negative. Kehr⁸ found calculi under these circumstances in 46 per cent of 36 cases in which palpation of the common duct was negative⁹.

I do not wish to be understood as advocating the opening of every common duct during an operation in which the gall bladder is either drained or removed, but I am more and more convinced that if we adhere to the indications just stated that we will overlook fewer calculi than we have in the past. The opening of the common duct in its supraduodenal portion does not add to the mortality of the operation but it requires considerable familiarity with the anatomy of the region and the use of instruments which are fine enough to do eye work with. The dissection must be done in the most delicate manner as inestimable damage will follow the rough handling of these structures around the common duct.

My method of procedure at the present time is to inspect the gall bladder and to decide whether it shall be removed or not. The contents of the gall bladder are then first aspirated and the calculi, if any are present, are removed through an incision in the fundus of the gall bladder. If one of the indications mentioned above for opening the common duct are present, a forceps is applied upon the

fundus of the gall bladder and traction made in an upward and outward direction toward the right shoulder so as to render the cystic and common ducts as tense as possible. The technic of opening the common duct in its supraduodenal portion and the exploration of the hepatic and common ducts is described below and can be readily understood by referring to figures 5 and 6. If the operator has decided not to open the common duct the removal of the gall bladder is begun at its neck and performed in the manner now

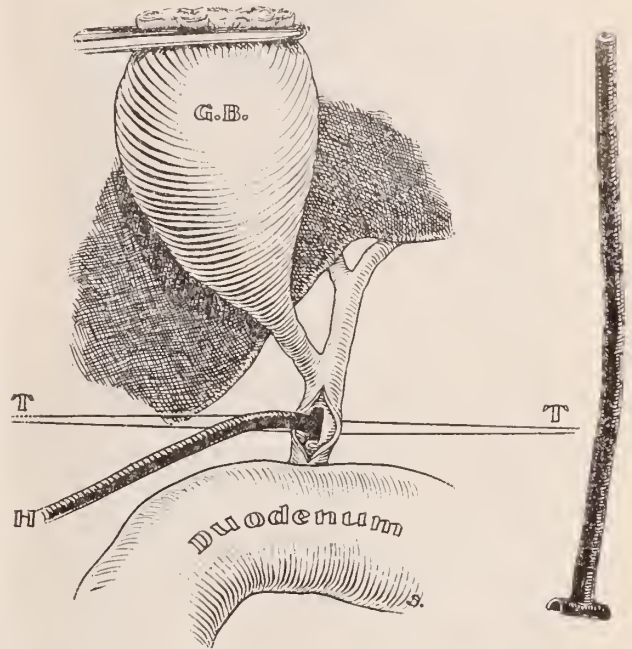


Fig. 6—T-tube (H) being inserted into supraduodenal portion of the common duct through incision shown in Fig. The edges of incision are pulled apart by traction sutures (T).

Note on the right of picture how horizontal limb of T-tube is only one-fourth inch long and how half of circumference of horizontal limb has been cut away.

accepted as a standard one by the majority of operators.

Step One. The incision to expose the gall bladder extends from the angle formed by the ensiform process and costal arch downward through the inner third of the right rectus muscle to a little above the level of the umbilicus. The patient's lumbar region has been previously elevated by the device attached to the operating tables in common use. The above incision not only permits the most perfect exposure of the common and hepatic ducts as well as gall bladder, but enables one to inspect directly the stomach and duodenum. It is surprising how close to the abdominal wall such an incision brings the principal bile passages.

⁸Archiv. f. klin. Chir., 1912, 97, 301.

⁹I have added to Kehr's four indications for opening the common duct a fifth, viz., that when I operate a patient who has either had the gall bladder removed or only drained and no calculi can be found in the common duct in the former instance upon palpation and in the latter (after simple drainage) in the gall bladder, I open the common duct when it is much dilated, especially if the pancreas is very hard and nodular. I have found calculi under these conditions at three secondary operations which had been overlooked by the surgeon operating the case for the first time.

Step Two. After having inspected the stomach and duodenum, the gall bladder is examined, and

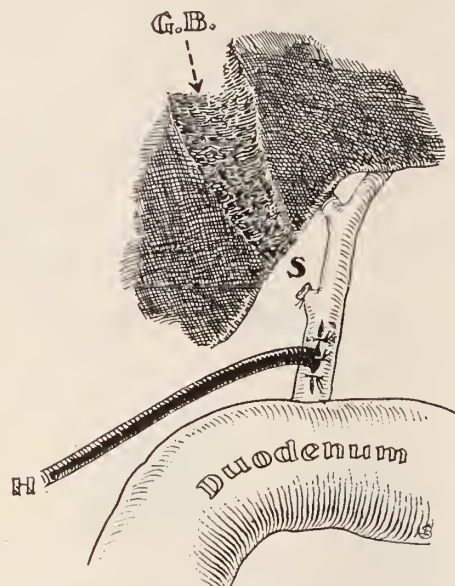


FIG. 7.

if calculi are contained therein, these are removed by the generally accepted method of an incision through the fundus of the gall bladder, after having aspirated its contents with the trocar and rubber tube attached to a 3-ounce metal syringe.

Step Three. Exposure of the Bile Ducts. The fundus of the empty gall bladder is grasped by a long-bladed artery forceps, and an assistant instructed to make gentle traction in the direction of the right shoulder. This procedure also pulls the right lobe of the liver in the same direction as first suggested by Mayo-Robson. The neck of the gall bladder, cystic, hepatic, and common ducts are now exposed. If these structures are enveloped in adhesions, the exposure obtained enables one to separate and ligate the adhesions and to cover with suture raw surfaces by sight and not by touch. A very important detail in securing a good exposure of the common duct is to have the proper retraction not only of the gall bladder and right lobe of the liver toward the right shoulder but also of the stomach, transverse colon, and of the omentum toward the left and downward. Such retraction is best secured (2) by the use of the Deaver and Kelly retractors; (b) by not packing too much gauze into the abdomen, and (c) by instructing the assistants (preferably only two being employed) only to keep up firm retraction, and not to relax their holds from time to time, thus per-

mitting the above viscera to drop into the field and cover the common duct.

Step Four. Exploration of Common and Hepatic Ducts. I prefer to employ instruments and suture material as fine as those used for eye operations in opening the common duct. The hepato-duodenal ligament is first identified as marking the right border of the envelope of peritoneum covering the common duct, portal vein, and hepatic artery. By retraction of the viscera (especially the duodenum) around the common duct the latter is readily seen covered by a thin layer of peritoneum, which is divided by a fine scissors, and the opening thus made widened by spreading it with a blunt-bladed curved scissors. Two traction sutures of very fine (00) catgut are inserted with an extremely small needle (such as is used for eye work) through the wall of the common duct in its supraduodenal portion (Fig. 5). There are a few small veins which run parallel to the duct, and occasionally an anomalous small artery which

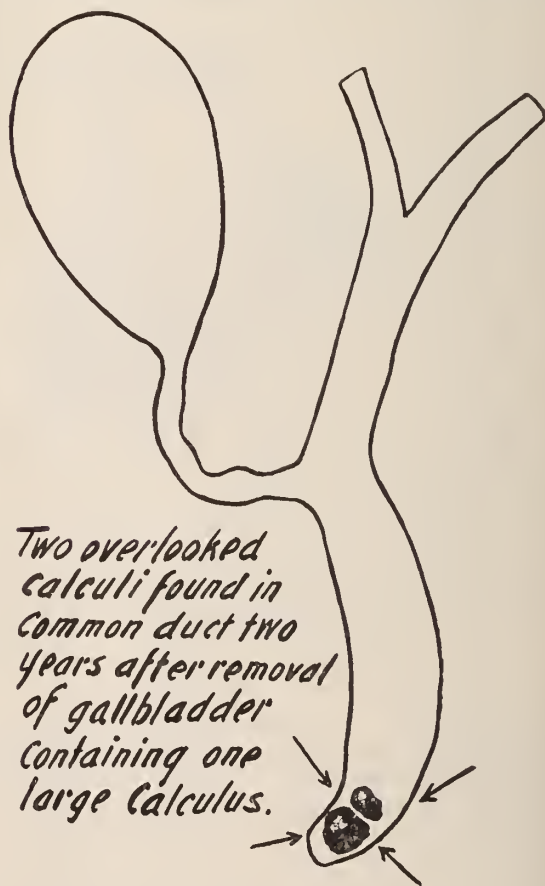


FIG. 8.

Photograph of calculi from case in which the common duct was opened two years after a cholecystectomy had been performed. The principal symptoms were pain, moderate rise of temperature and slight icterus. Two calculi were found.

passes transversely across the front of the duct. Bleeding from both of these vessels is easily controlled by a transfixion ligature. The duct is now incised with a fine, preferably angular, scissors for a distance of one-fourth to one-half inch. It is a wise precaution before opening the common duct to place a gauze sponge into Morison's pouch over the right kidney. The opened common duct (Fig. 6) is now explored in an upward direction into the hepatic ducts and then downward, until one feels certain that no calculi have been overlooked. A flexible probe is finally passed through the papilla in order to be sure that the lower end of the common duct is not obstructed.

Fifth Step. Drainage of the Common Duct. I prefer the T-shaped rubber tube* first used by Kehr (Fig. 6), and which is now in this country employed by Deaver and others. The opening in the common duct is closed around this tube with the same size chromic catgut which was employed in the traction sutures described in Step Four. The tube itself (whose horizontal limbs should only project about one-fourth inch beyond the vertical portion) is held in place with a plain catgut suture.

Step Six. Removal of the Gall Bladder. I prefer to do the cholecystectomy, if one has decided that the pathologic changes in the gall bladder demand its removal, after the common duct exploration and drainage, because the gall bladder is a very convenient tractor for the common duct. Kehr reverses the steps by first removing the gall bladder and cystic duct close to the common duct so as to make an opening in the common duct large enough to explore both the latter and the hepatic duct, introducing his T-tube through the same opening.

The technic of cholecystectomy requires no special description. I first carefully separate the neck of the gall bladder and cystic duct from the common duct before ligating the cystic artery, which runs, as a rule, along the upper border of the cystic duct. The latter should be ligated as close as possible to the common duct in order to avoid the formation of a gall bladder in the dilated stump of the cystic duct. The careful separation just mentioned enables one to avoid injury of the common

duct if, as frequently occurs, the diverticulum-like enlargement at the neck of the gall bladder is adherent to the common duct or if any of the anomalies in the course of the bile ducts are present.

A very small rubber tube is sutured with plain catgut to the ligated stump of the cystic duct to take care of a possible leakage from the same. Three strips of 2-inch wide gauze are placed around the common duct T-tube, one of these strips being placed well down into Morison's pouch over the right kidney.

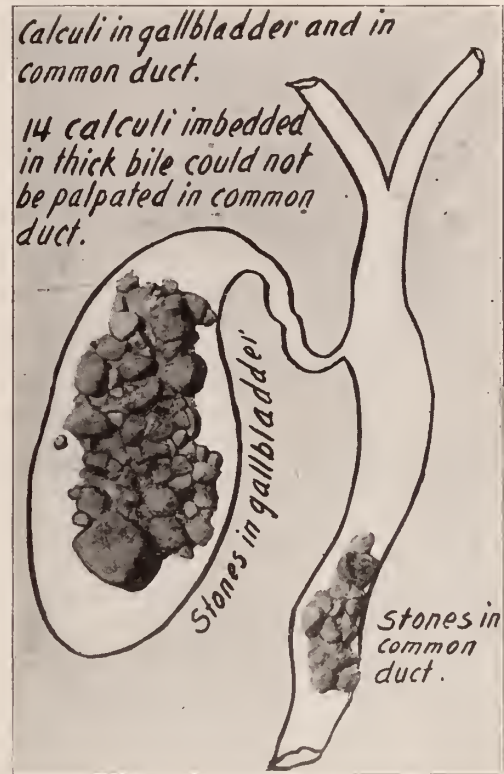


FIG. 19.

Photograph of calculi removed from gallbladder and common duct in which the calculi in common duct lying in the supraduodenal portion of the duct could not be palpated. The common duct in this case was opened upon the indication of finding a great many small calculi in the gallbladder.

Removal of Drains. The gauze strips are pulled out at the end of eight days and a single narrow one put in their place. The T-tube is allowed to remain from fourteen to twenty-one days, and can be easily removed at that time, and it will do no harm if it remains even longer. I have never encountered a case, in nearly forty choledochotomies, where the tube could not be removed by employing gentle traction, and have never seen a common duct fistula follow its employment.

*It can be obtained at Chas. Lentz & Sons, Philadelphia, in the sizes which I prefer to use, viz., one-eighth and one-quarter inch diameter.

SEPTIC SORE THROAT — THE GALESVILLE EPIDEMIC.*

BY I. F. THOMPSON, M. D.,

EAU CLAIRE.

It was known for many years before the organisms causing these diseases had been isolated, that there was an affection of the throat differing in many respects from Diphtheria or Tonsillitis, yet having many of the same symptoms. The disease we now know as Septic Sore Throat, or Streptococcic Sore Throat, was then called Pseudo-diphtheria. You will find it so-called even as late as 1912, though the organisms causing both Diphtheria and Septic Sore Throat were isolated and differentiated in 1883-4. Very little mention is made in any Practice or Diagnosis, or even in works published expressly for the Nose and Throat specialist, written before 1915-16, and even there it is described in a few short paragraphs.

It is only from reports in various journals that we may get a real picture of the disease. These reports are often conflicting, and we might not recognize from one description the same disease as described by another. This seeming discrepancy is easily explained. The writers describe the disease as it occurred in the epidemic or series of cases that they happened to see. There are undoubtedly many strains of streptococci. These different strains may produce different trains of symptoms, and especially of complications.

With the exception of Winslow, Frost of the U. S. P. H., Rosenau, and Rosenow, and a few others, no one has witnessed in this country more than one epidemic or series of cases. Hence we get the varied descriptions of the disease.

In England, outbreaks of sore throat have been reported since 1875. It is said that not a year passes in that country but somewhere on the island there is an epidemic of the disease, of more or less magnitude.

Understand, I am speaking of a sore throat which is not a Tonsillitis nor a Diphtheria. Diphtheria was described and prevalent for years B. C. The relation of the transmission of the sore throat to the milk supply was suspected early, and in many cases confirmed. A compilation of the literature of these early epidemics shows that the first

reported epidemic occurred in May, 1878, in North London. Two hundred and sixty-four cases were reported. There was no diphtheria nor sore throat at the milk farms, but the question was raised as to whether garget in cows might not induce such changes in the milk, as to give diphtheria to the human subject.

With the lack of knowledge of bacteria at that time, such a surmise is not to be wondered at, yet it shows that the relation of the disease in man to a disease in animals was suspected.

In October, 1878, there were 48 cases reported in Surrey. There was no diphtheria on the farm. One cow had lately suffered from garget.

Other epidemics are noted, and the following comments are taken from the reports:

"The epidemic was supposed to have originated in the milk of a diseased cow." . . . "One of the cows had garget, and the epidemic began to decline rapidly eight days after the stoppage of the milk supply."

An interesting report of an epidemic at Glasgow, in 1890, has the following description of the disease: "The epidemic manifested itself chiefly in the form of a severe sore throat, but in a number of cases a typical erysipelas developed. This conjunction of sore throat and erysipelas is interesting: and it may almost be said, from the acute character of the inflammation of the throat, and its suppurative nature in some cases, that it also had many of the features of erysipelas. In all, the tonsils and fauces were intensely congested, one having a distinct erysipelatous appearance. In several the pharynx was also involved in the congestion. In two of those who drank freely of the milk, and continued its use longest, there were membranous exudations in the shape of patches on the lips and tongue, but none on the tonsils and pharynx. Submaxillary glands were invariably enlarged; temperature was high during the first few days. Prostration was a marked feature."

In 1905 in England an outbreak with the estimated number of 660 cases occurred. The cases were confined almost entirely to consumers of milk from one dairy. A cow was found with mastitis, giving milk containing pus and streptococci. This cow was isolated, and the outbreak immediately stopped. Throats examined showed streptococci. Milk from wagons showed pus and streptococci. Milk from diseased cows was filled with pus and streptococci.

*Read before the 71st Annual Meeting of the Wisconsin State Medical Society, Milwaukee, Oct. 3-5, 1917.

There are other reports in the English Journals, preceding the time of the first epidemic in America, but the extracts I have given you, will show you how long a period the disease has been recognized, and that the relation to disease in cows was noted.

The first recognized epidemic of Septic Sore Throat in America occurred in 1910-11, in the vicinity of Boston, and was studied and reported by Winslow in 1912. This epidemic occurred in one of the best dairies in the East. Since that date, there have been several other epidemics in the Eastern States, more or less exhaustively reported, and with which you are probably familiar. There has been one extensive epidemic in Illinois. The disease, except in isolated cases, had not been seen in Wisconsin until the Galesville epidemic of this year.

The infecting organism.

The infecting organism in this disease is the streptococcus. It is not my purpose to start any discussion regarding any differentiation of this organism. To the general practitioner it is of no moment. It is enough to know that the infection is not diphtheritic, nor due to the staphylococcus. I will, however, give a brief description of it. Some authors are of the opinion that a relation exists between the length of the chain and the virulence of the organism. They state that the long chain is the most virulent, and that it is the only one concerned in animal pathology, and that the length of the chain is dependent on the media or tissue on which it grows.

I cannot agree with these statements. The organisms causing the Galesville epidemic were most terribly virulent, and whether taken directly from the throat of a patient, directly from the udder of the cow, from bottled milk several hours old, or grown on the various media, they were almost always in short chains. The organism was recovered from the blood of one patient, the blood taken while the patient was having his initial chill, and the cocci there were in the same short chains.

The cocci were seldom over three in number and frequently but two in number in the chain. They were Gram positive and haemolytic in their action. When recovered from the milk, the organism was surrounded by an extensive capsule. This is one point in common in all reported epidemics of septic sore throat in this country.

In making smears from the throat, the swabs should not be taken from the reddened inflamed surface, but by making careful massage of the tonsils, or by applying pressure, so as to expose the tissues back of the pillars, masses of mucous will appear. Smears made from these masses will show the organisms in profusion.

In examining the milk, it must be borne in mind that pus cells and streptococci are frequently present in milk.

Mode of transmission.

Septic sore throat may be transmitted by direct contact, or by means of food, especially milk. There has been at least one extensive epidemic (reported in New York State Board of Health bulletins) which was transmitted by direct contact.

The usual manner of transmission is by the use of infected milk. This milk may become inoculated either from the throat of a careless handler of the milk, or the cow may be infected by the milker, and later produce milk containing vast numbers of organisms virulent to man.

Symptoms.

Various authors state that there is an ulceration of the pillars or uvula covered with a heavy gray membrane. Other writers mention the membrane without the ulceration. The Galesville epidemic showed neither ulceration nor membrane, except in three cases. The pillars and fauces were red and congested, as were all other tissues of the throat. The uvula was generally edematous. The blood vessels were dilated, and appeared like red threads on the inflamed membrane. All the tissues were covered with mucus, glistening, and transparent in appearance. There was an excess of mucus in the mouth. The tonsils were not enlarged. The cervical glands were enlarged in practically every case. This is contrary to description given by some writers. In no case did the glands suppurate and break down. There was usually some pain on swallowing. It was difficult for the patient to turn his head. A common remark, when asked if the throat was sore, was, "Yes, on the outside." Fever was always present, usually high. Occasionally it ran to 106—104.5 were common. Respiration and pulse were usually in direct ratio to the temperature. Occasionally the pulse was slowed. When there was an extension of the infection to the heart, the pulse was very rapid and weak.

The attack was always preceded by a chill, more or less marked in character. This was followed by a profuse sweating. Vomiting was frequently an early symptom, occasionally being the first symptom noted. In a few cases the vomiting persisted, and was so severe as to be reckoned as a complication. Prostration was severe. These symptoms should not be expected in all cases, although they did occur at Galesville. Some writers do not mention the chill. Vomiting is not given as a symptom, and cervical enlargement has not been noted even in extensive epidemics. The finding of the infecting organism is the diagnostic point.

Differential diagnosis.

The differential diagnosis of this disease from those closely allied in appearance may at times be difficult, if one does not have facilities for microscopic examination.

In Vincent's Angina ulcerated patches are the rule. The finding of the fusiform bacillus with the spirillum is proof positive.

In tonsillitis or quinsy the tonsillar tissue will show itself to be most inflamed, and usually swollen.

In scarlet fever, we probably have a streptococcal infection of the throat. The strawberry tongue is generally present. The throat is usually dry. The rash, appearing in 24 to 48 hours, will confirm the diagnosis.

In diphtheria, the presence of the membrane should be taken as proof, until bacterial examination can be made.

I have found, that since our outbreak, many physicians are calling all inflamed throats, a septic sore throat. This has led, and will lead to the spread of both scarlet fever and diphtheria.

Septic sore throat is not of common occurrence. Scarlet fever and diphtheria we have always with us. Do not call an inflamed throat, a septic sore throat, until you have eliminated scarlet fever and diphtheria.

I would urge a more general use, in fact, a routine use of the examinations made by the State Hygienic Laboratory, in all throat affections. While it is true that the clinical symptoms sometimes conflict with the laboratory findings, such reports will be few and far between. The establishment of branch laboratories in various parts of the State is bringing this help within easy reach of the physician.

Complications.

Some epidemics have shown but few complications; while others have shown many.

Otitis media, as would be expected from the congestion in the throat, is most frequently met with.

Erysipelas often occurs, usually affecting the face and head.

Serous membranes are affected, in some epidemics, more than any other tissues. Endocarditis, pericarditis, peritonitis, pleurisy, occur, and enlargement of the bursa of the joints, with considerable tenderness and pain may be expected. Meningitis or neuritis are possible complications.

At Galesville there was one case of orchitis.

Prognosis.

Septic sore throat, in the usual epidemic, is not virulent, and the death rate is low. Such deaths as do occur are caused by complications.

Recurrences or relapses are common, in fact, they are a striking feature of this disease. A death was reported to me early in September of one of the Galesville people who was first attacked in March.

Treatment.

The treatment of this disease is purely routine. Avoid all possible chance of further infection. Use a simple spray for the throat, to soothe the inflamed tissues, and the patient's mind. Medicinally, the use of alkali should be pushed until the system is saturated, and the urine becomes alkaline, or at least neutral, and held at such a reaction, as a preventative of acidosis. Keep the bowels open with any of the magnesium salts.

Any complication will have to be cared for as it may arise. I am unable to find any reference to the use of serums, or of autogenous or stock vaccines in an epidemic of septic sore throat. One dose of stock antistreptococcal vaccine was given to one patient at Galesville. This was an unusually severe case, complicated with erysipelas. The one dose of vaccine brought the temperature down three degrees for a considerable period of time, and enabled the patient to have a quiet rest, and a few hours of relief. The temperature gradually rose, until it was the same as before the injection.

Alkaline baths should be given when the temperature is high.

Proper disinfectants and care should be used to prevent contact infection.

THE GALESVILLE EPIDEMIC.

A preliminary report on this epidemic appeared in the *Journal of the A. M. A.* for May 5, 1917, and a condensed copy of our report (Dr. Henika of the First District and I working together on this epidemic) has been published by the State Board of Health in a bulletin. Necessarily my remarks will follow that report.

It was our unusual privilege to be called at the height of the Galesville epidemic. No previous epidemic of septic sore throat in the United States was ever studied during the height of the epidemic, nor has it heretofore been possible definitely and promptly to isolate the cows causing the infection, and check its further spread.

At no time previously has every patient been visited, and the source of infection of every case definitely fixed.

Every home in the village was visited, and the number of families, number of people in each family, their water and milk supply, age, sex, the date of illness, and the severity of each case, the possible source of infection and the complications were noted. All of this work was done while the facts were still fresh in the minds of the people.

The epidemic may be divided into three periods: February 26 to March 3; March 4 to March 17; March 18 to 19.

The first case occurred February 26. From then to March 3 only a few new cases occurred each day. On March 4th 44 new cases appeared. On the 5th, 23 new cases. On the 6th, 31, on the 7th, 46. This was the greatest number of new cases for any one day. This period of the epidemic continued for ten days longer, or until March 17.

We were called and took up the work on the evening of the 14th. We definitely proved the source of the infection before noon of the next day. Preventative steps were taken, but, as will be shown later, the incubation period was 48 hours, results could not be expected before the 18th. The 18th was anxiously awaited. One new case appeared that day. On the 19th one case, definitely proven to be a contact case, occurred. No more new cases developed after that date.

The explosive nature of the epidemic, and the large number of people infected pointed to a single

source of infection, either the milk or water supply of the village. To check any further spread of the disease while we were endeavoring to locate the source of infection, a bulletin was immediately issued, and placed in every home, requesting the people to boil all milk and water, and giving full directions for disinfecting all discharges from the patient, and such other precautions as were necessary to prevent contact infection. It should be mentioned here that all previous epidemics have shown a large incidence of contact cases.

Slides were made from the secretions taken directly from the throats of several patients. These, when stained and examined under the microscope, showed the predominating organisms to be streptococci.

Several of the afflicted families were interviewed, and it was found that the majority of them obtained their milk from the S. Bros. Dairy, while their water supply was derived from various sources. A bottle of milk was obtained from S. Bros., a sample centrifuged, and slides made of the sediment. On examination, these slides showed multinuclear cells, pus cells, and a short chain coccus present in enormous numbers. These findings led us to believe that we had established the nature of the infection, and the mode of its transmission. Subsequent investigation showed this to be true.

The dairy.

The dairy had been located adjoining the village, for the past six years. The barn is a two story structure. The first story is built of stone, and the second story is of frame construction. The building is fairly well lighted, and provided with a ventilating system. The floor and feeding troughs are built of concrete. The stanchions are of steel, with the cows facing the two side walls. Running water from a spring was provided in a large tank in the middle of the barn. One end of the barn is used as a horse stable, with no partition separating the horses from the cows.

The milk house.

The cooling and bottling of the milk are done in a small building attached to the barn. The entrance to this room from the barn is by a direct doorway. The gasoline engine used to run the cream separator is located in the same room where

the milk is handled. The plant is equipped with a steam boiler for sterilizing purposes. A tank is also provided with running water, for cooling purposes. The room is also used as a workshop, which causes more or less litter about.

In addition to their milk business, the S. Bros. manufacture ice cream in their milk house.

The herd.

The herd consisted of forty grade Jerseys, twenty-six of which were being milked at this time. These cows remained in the barn the entire twenty-four hours, and occupied daily their respective places. No stock from the outside had been added to this herd during the past six years. Three of the cows, upon examination, showed marked evidence of mastitis in one quarter. The milk from these cows did not show signs of garget, as the term is generally understood. It was not thick nor clotted, nor did it show blood. The milk of two of these cows had a watery appearance, while the milk from the third appeared normal. Samples were taken in sterile containers from each teat of every cow producing milk, and placed on ice. Not having facilities for centrifugalizing so many samples, we took them to the Board of Health Laboratory at La Crosse, where we were aided by Dr. J. M. Furstman in making our examination of the milk.

This examination showed that short chain streptococci, similar in appearance to those found in the throats of patients, and in the milk first examined, were present in large quantities in the milk of six cows. Three of these proved to be the same cows that showed evidence of mastitis upon the physical examination, while the other three showed no evidence of mastitis. One of the six infected cows showed a subnormal temperature. The temperature of the other five was normal. One cow showed evidence of stiffness of the joints. Two of the cows were in very poor condition. Three of the six cows were young heifers, and appeared to be in perfect health. An examination of the horses, as well as the cows, showed them to be free from any skin disease.

Three of the infected cows stood adjacent to one another. The first two were the cows which were in poor condition, and were old cows.

The third was a young heifer, who showed no evidence of mastitis, but examination of her milk showed that she was as badly affected as any of the

others. The six infected cows were quarantined, and the State Veterinarian notified. The milk from the balance of the herd was ordered pasteurized before being sold or manufactured.

The milk from this dairy is handled by four men, two of whom are the owners of the plant. All four of these men were examined, and found free from lesions upon their hands. Cultures from the throats of three of them showed streptococci present, but they gave no history, nor showed any evidence of illness except a slight redness of the throat.

One of the S. Bros., on or about January 28, 1917, suffered an attack of severe sore throat, the nature of which we were unable to determine. It was accompanied by a marked enlargement of the glands of the neck.

It is possible that this was a streptococcal infection, and that one or more of the six cows were infected at that time.

To eliminate any other source of infection, and to prove to ourselves and the people that the infection was confined to the one dairy, all other cows or herds furnishing milk to the village were examined, and in no case was there a similar organism present in appreciable numbers, nor were pus cells found in the milk.

The principle water supplies of the village were also examined and the water found safe.

The organism isolated, I have previously described.

Survey of Galesville.

The survey of Galesville, elicited the following facts: Galesville is a village with a population, as enumerated in our survey, of 941 persons, including all children. It has no large manufacturing industries, and is surrounded by a rich farming community.

The village is divided into several parts by high ridges, a lake, a river, and low marsh land. The several parts are variously described as the flat, the first table, and the upper table. There is good drainage in all parts of the village except the flat.

The total number of families in the village was 242. The total number of families with one or more cases was 121. This shows that exactly one-half the families in the village were affected.

The total number of individuals affected was 325.

Time of onset.

It was possible to fix the time of onset of the disease in nearly every case, as the initial symptoms were very prominent and the survey was made while the dates were still remembered. Then too, 32 cases were found, who had used the products of the S. dairy but once and knew the exact time it had been used.

The period of incubation in other epidemics has been given as three days. Our survey showed that the period of incubation in this epidemic was less than 48 hours.

Only two cases were found that could be classed as contact cases. One of these was one of the practising physicians in the village and the other contact case was an infant. All other cases gave a history of direct exposure to the infection through the use of the products of the S. dairy.

There were—

39 homes with 1 case.....	39
34 homes with 2 cases.....	68
20 homes with 3 cases.....	60
16 homes with 4 cases.....	64
6 homes with 5 cases.....	30
3 homes with 6 cases.....	18
1 home with 7 cases.....	7
1 home with 8 cases.....	8
1 home with 9 cases.....	9
Gale College	22
<hr/>	
121 homes affected.....	325 cases

Source of infection.

The mode of contracting the disease is shown in the following table.

Number of cases using S. milk daily.....	255
Number of cases in families not using S milk.	68
These 68 contracted the disease as follows—	
Cases who ate at restaurant using S. milk	44
Cases who ate S. cream at parties.....	9
Cases who used S. cream but once.....	12
Cases eating S. ice cream (not included above)	1
Cases eating S. cream at school (domestic science)	2
<hr/>	
68	323
Contact cases	2
<hr/>	
	325

Number of people using S. milk who did not contract disease 48

As a result of this epidemic there have been 14 deaths in the village, or a little more than 4 per cent of all cases infected.

The study of epidemics of this disease shows that it is likely to recur in the same district, or other districts in the same general locality. It has been introduced into Wisconsin, and we may expect other epidemics of the disease in our State.

It is for you men to recognize it and the possibility of its spread. It is not like typhoid, whose long period of incubation makes it almost impossible at times to trace the source of infection.

Septic sore throat strikes quickly, and just as quickly, when the source is found and eliminated, does the epidemic stop.

From our study of the epidemic at Galesville, we felt we were correct in saying:

That the epidemic was milk-borne, and due to a streptococcus.

That the source of infection was limited to six cows in one herd.

That there is a possibility that one or more of these cows became infected during the attack of sore throat in one of the owners of the herd.

That there is a reasonable possibility that some of the cows were infected from the hands of the milkers.

From what we know of pasteurization, as commercially done, that the pasteurization of bottled milk under official supervision is the only method of securing a safe milk supply.

The dairy at Galesville was as good as the ordinary and usual type of dairy found supplying most of the villages and cities in Wisconsin. Any village or city that does not require efficient pasteurization, is just as likely to have an epidemic of septic sore throat as was Galesville.

DISCUSSION.

DR. EDWARD EVANS, La Crosse: I was asked by Dr. Thompson to present myself before you as Exhibit No. 1 of this epidemic. There is also another exhibit in the audience who can show himself to you after the meeting as an example of what septic sore throat can do.

I was called up to Galesville on the 14th of March, after having protested on the 12th against going and suggesting that they call the health officer instead.

I can confirm most of what Dr. Thompson has said. I never saw such a shambles in my life. It would remind you a good deal of the descriptions you read of the Black Death in England and Continental Europe. Al-

most every household had from one to 2 or 3 or 4 or 5 cases of this throat trouble, and all of them were desperately ill. The few cultures I was able to take that day, being limited in the material I had, showed just the same condition, both in the swab and culture, as Dr. Thompson has spoken about. The swabs from my own throat and the cultures from the same showed just the same small, short, streptococci, no long chains, two mostly, and very rarely even 4 in a chain. The two cases that I saw there and studied—that is, I went to see them for Dr. Powell, who was out in the country, did not, as I remember it, have a chill. I myself did not have a chill, and I did not have any sweats at the beginning of the illness; I did not have marked enlargement of the glands of the neck. And neither of the two cases that I saw had enlarged glands, although the case I was called up specially to see was a case that I was told was probably a surgical case, because the glands were so large.

The incubation period in my own case was about 60 hours, followed by a gradually increasing soreness of the throat. This went on for some days before I even had to spend all the time in bed, and was then followed by a laryngitis so severe that for one night I kept one of my assistants in the house with tracheotomy instruments. I got my infection by doing a tracheotomy, the patient blowing in my face when I opened the trachea. So I knew exactly when I got my attack, and how long the incubation was. I was another direct contact case, in addition to those mentioned by Dr. Thompson. Following the laryngitis which cleared up in a rather short time, I had a tracheitis for 24 hours. This was followed by a glossitis, and for nearly 24 hours I was absolutely unable to swallow anything, and could not close my mouth—it is not easy for me to do that anyway—and after this had begun to subside, the erysipelas followed, and a few days after the onset of the erysipelas, multiple neuritis intervened, and for 5 weeks I had to be fed, I could not move on the bed. So that this disease is a pretty terrible thing. I have just gotten back to work the 12th of last month, having lost six months all but one week.

As to the treatment, I do not know anything that is good for it, and no one who came to see me seemed to know of anything. One of my old friends came in, and after talking with me a while he said, "I think they are treating you with ultra-scientific nihilism" and suggested that I take some salicylate of soda, and that night I lay with my head in a wooden trough, with the water reaching, I think, just about to my breathing apparatus, and I did not try any more of that. The only fun I had during the illness, which ended rather disastrously for me, was one night I went out gunning for Germans; I met a German with a gun, as I had, and there was an open grate between us, and I thought it was his, and he thought it was mine; after a while I got philosophy and I tried to convince him it need not belong to either of us if we had any common sense, and just then he blew my head off, and I woke up with a shunt. You put in a pretty lively time with queer companions, when you have a streptococcal infection. In spite of the fact that I did not have a dreadfully high temperature, about 102,

I had a leucocytosis I think, of about 20,000, and was very sick. I was terribly wasted, and it left me mentally—that is during the illness, I hope not since—rather broken up. It took a long time to recover my muscular power, and the terrible part it was that horrible weakness that followed. I had no joint complications, and none of any of the serous membranes. In fact, the thing I had that was so severe was that multiple neuritis. An interesting thing about that is that 44 years before, I got an infection from a vaccination, one that gave me a severe erysipelas, followed by just the same neuritis. It is interesting to note that just the same symptom followed after 40 years, in the same individual.

DR. HENKA, Madison: Mr. President and Gentlemen: It was my good fortune to be associated with Dr. Thompson at Galesville during this epidemic, and I should like to take this opportunity of emphasizing a few points that both of the previous speakers have brought out.

The principal one is the desperate condition in which you find your patient. The first night that I was in Galesville, accompanied by Dr. Evans and Dr. Bowers we saw approximately 20 patients, and I never in my life saw 20 people that were so desperately sick.

As Dr. Thompson has already told you, this condition is liable to occur in any community in the state, and it behooves all of the practitioners to keep their eyes open for streptococcus sore throat. But do not make the mistake of calling tonsillitis or scarlet fever septic sore throat, as has been done in the last six months or a year.

Another point that it is well to remember is the almost universal affinity of this streptococcus for the serous membranes. In the vast majority of the cases in the epidemic at Galesville the people were afflicted with one or more joint involvements. Many of them showed an involvement of the endocardium or pericardium.

Another interesting feature wherein this epidemic differs from previous epidemics in the United States as well as in foreign countries is in the very few contact cases. Counting Dr. Evans, we have only 3 out of 325, and I firmly believe that the first step taken after we reached the ground, in issuing a printed bulletin and seeing that that printed bulletin went into every home in that vicinity was a material factor in cutting down these contact cases. In that bulletin we not only gave the ordinary measures of preventing contact infection, but we told the people how to disinfect the fecal matter from the patient, how to care for the bedding over the patient, the dishes that came out of the sick room, the destruction of the food that was not consumed, and asked the co-operation of every inhabitant of the village, by boiling the milk and water. This was done before we positively knew that the infection was in the milk. That is a measure which should be adopted more frequently in some of these universal epidemics of that type.

Dr. Evans spoke of the weakness following the infection. The vast majority of the cases that were inter-

viewed gave that history of weakness. Some of them that were apparently not very ill during the acute attack, showed a profound weakness that lasted from 3 to 5 weeks.

I wish also to make it plain that the State Board of Health will be glad to mail you a reprint of this report in bulletin form upon request. I thank you.

DR. I. F. THOMPSON, Eau Claire: I have nothing further to add; the points brought out by Dr. Evans and Dr. Henika were along the lines on which I have spoken.

In our survey of Galesville, the number of cases reported was in the village; we did not include those occurring in the country or in other cities. There were cases reported from Superior, St. Paul, Minneapolis, Milwaukee, and Madison, all giving a history of infection at Galesville. This only goes to show that an epidemic or outbreak of any disease, in any part of our state may affect your city or my city no matter how far distant.

THE MANNER OF THE CEREMONY OF GRANTING THE DEGREE OF DOCTOR OF MEDICINE, AT SALERNO, IN THE YEARS OF ITS HIGHEST FAME. A. D. 1280.

(*Epitome Historiarum de Rebus Salernitanis, Naples, 1681. Fol. 140.*)

He who was to receive the laurel crown of the Doctorate, was obliged, first by oath and witnesses, to prove credibly his legitimate birth, that his age was not less than 21 years, that he had publicly studied by consent of the Regents, for a period of seven years, that he had undergone a severe examination, had publicly defended some Medical proposition, either from the writings of Galen, the Canons of Avicenna, or the Aphorisms of Hippocrates; and in Arts: a treatise upon Philosophy, Physics or advanced Analytics, and to bind himself by many oaths (in early times he took his degree at the hands of the Prior, or from such other officer of the faculty, as the Prior might appoint), which were, never to do ought that should disgrace his college, to teach nothing that was false or harmful, to give himself to no mendacity, to receive no reward from his care of the poor, to give the penitential sacraments to the dying; in matters of business, to be in the highest degree honorable, to exhibit no drug that would produce abortion of the pregnant uterus, nor give any poisonous or harmful remedy in his care of the human body.

Shortly after, the insignia of his degree were brought to him. At first a closed book, and then one opened, as a symbol that wherever he would upon the entire earth, he was authorized to practice the profession of Philosopher and Physician. His finger was encircled with a gold ring, his head was crowned with a laurel wreath, he was embraced with a kiss, and then he was dismissed with the paternal Benediction, fully adorned with the dignity of the Doctorate.

THE CHEMICAL MECHANISM OF ATROPHY, INVOLUTION, AND HYPERTROPHY.*

BY H. C. BRADLEY,

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MEDICAL SCHOOL,

MADISON.

The great majority of atrophies, involutions, and necrotic changes are chemical liquefactions of the protein constituents of the tissues and the removal of their soluble products by the blood. In special cases the action of phagocytes is undoubtedly important in the removal of material, but even in such cases the phagocytosis is secondary, while the chemical changes which the tissue first undergoes gives rise to chemotactic substances attractive to the phagocyte. Normal healthy tissue has little chemotactic pull on the phagocytic cell.

Atrophic changes in the body have been identified with the ability of dead tissues to digest themselves since the investigations of Jacoby nearly twenty years ago. He showed that the phosphorus poisoned liver contained products of protein digestion—the amino acids—in quite significant amounts. These are exactly the products found in the intestine at the height of proteolysis there. Jacoby showed further that such a disintegrating liver contains powerful proteolytic enzymes, quite like those of the intestinal tract itself, and capable of digesting the proteins of the liver with considerable speed. But the normal liver also contains these enzymes, and curiously enough the normal liver appears to be as rich in them as is the disintegrating liver, although one is not undergoing digestion while the other is rapidly digesting away. What then starts the process of autolysis? Why is it that we are not all of us undergoing rapid atrophy at this moment, since all of our tissues, lungs and brain, muscles and spleen, liver, kidney, and the rest are all provided with these proteolytic enzymes? What checks this digestive process once it is set in motion? Why does it wipe out an organ in one case, and only reduce the mass of it in another by a small amount? How can a tissue which has been digesting itself away for a period turn about and build itself up, or hypertrophy? Is there any relation between the process of atrophy

*Read at the 71st Annual Meeting of the Wisconsin State Medical Society, Milwaukee, Oct. 3-5, 1917.

and the process of hypertrophy? And finally can the clinician hope to control the obviously harmful atrophies incident to so many pathological conditions? These are some of the questions which have presented themselves for solution in this field. It must be obvious that a knowledge of the mechanism of autolysis might help us in answering this last and practical question.

The mechanism of autolysis can be most easily studied in the laboratory. I shall not have time to present the details of method or of data, nor the step by step development of the problem which has gone on in the last twenty years. Nor shall I burden you with details of our own more recent work. The general method of study however should be understood.

An organ is removed from the body, ground to a fine brei, weighed out and diluted with water saturated with toluol to prevent bacterial growth. An initial sample is taken and analyzed for proteins and amino acids. The mixture is then warmed up to 37 degrees C. and kept at that temperature till the experiment is concluded. During this period samples are taken from time to time and analyzed as at first. The protein diminishes while the amino acids increase, and the increase represents the rate and extent of digestion or autolysis. Such a tissue will invariably show small amounts of amino acids in the initial sample. No matter how rapidly the first steps of the experiment are made—and by freezing or chemically fixing, or by boiling, the analysis of the tissues can be made as of tissue at the very moment of death—there will be found amino acids. They are a normal constituent of living tissue, therefore, and are not to be considered the products of post mortem change.

Now in the study of such autolyzing tissue preparations we find that the addition of certain chemicals greatly accelerates the digestion, others inhibit it, still others have no effect upon it one way or the other. In general the following is true:

1. Acids of all sorts, mineral or organic, weak or strong, increase autolysis. So do all sorts of compounds whose solutions in water are acid—salts like $MnCl_2$, $FeCl_3$, KH_2PO_4 , Br, I, etc. Even so weak an acid as CO_2 bubbled into a digest increases the autolysis tremendously.

2. Anything which will make the mixture stay neutral or alkaline will correspondingly inhibit

digestion. Thus ZnO , $CaCO_3$, $NaHCO_3$, MgO , K_2HPO_4 , etc.

3. Substances which do not prevent the development of acidity, but do not themselves act as acids, are apt to have no effect on the digestion. Thus $NaCl$, KCl , K_2SO_4 , etc., are inert.

By proper choice of "buffer salts," acids, and mild alkalies, one can control the autolytic reactions in a dead tissue brei with perfect precision. Autolysis may be kept practically at zero, or increased so that all but the connective tissues digests away, or carried to any desired intermediate degree of digestion, simply by a definite control of the hydrogen ion concentration of the brei. Experimentally therefore we can maintain a tissue brei for an indefinite period almost without atrophic changes, yet capable of undergoing atrophic changes at any time the conditions are altered. The tissue is maintained as it were intact by preserving its neutrality. Or we can simulate an acute partial atrophy such as occurs physiologically when the mammary gland or the uterus undergoes involution. Or we can simulate the complete removals such as we have when the thymus atrophies, or the tadpole absorbs its tail, or a wart disappears, or an infarcted area liquifies and is replaced by scar tissue.

A generally accepted explanation of this fact has been that the proteolytic enzymes of the tissues are normally in an inactive condition, but are capable of activation. During starvation, as a result of injury, and as a regular post mortem change, autolytic enzymes are supposed to be produced in the affected cells. A more recent development of this theory ascribes to the hydrogen ion the role of activating the normally inactive enzymes of the tissues. Thus it has been argued that the acidity developing in an injured or dying cell renders the enzymes active and so starts autolysis. The theory of activation however has never been experimentally verified, while it is quite easy to demonstrate that within quite wide ranges of acidity and alkalinity the enzymes of a tissue are active. In the first place no matter how rapidly a tissue is killed and studied it shows the presence of active enzymes. In the second place a tissue which is kept from autolyzing itself by the addition of proper buffer salts, will at the same time digest peptone and certain other foreign proteins with undiminished speed. This shows conclusively that the enzymes are there and active all the time, but in neutral

and alkaline media they cannot digest the tissue proteins, while in acid media they can.

It is well known that proteins combine with acids, alkalies and salts. These combinations frequently show considerable changes in their physical properties and in their chemical from the original protein and from each other. Proteins are highly sensitive to changes in the H ion content of their solutions. In this particular case the presence of acids probably combined with the proteins is all that is necessary to change them from non-digestible to a digestible form. The acidity resulting from partial asphyxia of a cell, or of over production of CO_2 even, is sufficient to convert its unavailable proteins to an available form *and in direct proportion to the amount of acid produced*. This is of course a very important point in the argument, for if the enzymes were activated at some definite H ion level it should be possible to show a sudden complete activation as that level was reached. Further additions of acid should not cause further pronounced increases of activity. No such observation has been made. On the contrary the quantitative relations which we find to exist between the amount of acid added and the per cent of the proteins digested, shows beyond question that the acids alter the proteins, converting them into a digestible type. Thus in a severely poisoned liver cell, the reduction of oxidation, the asphyxia, and the oxidation of the phosphorus to phosphoric acid, combine to increase the acidity of the cell very considerably. Such a cell should soon show vacuolation, alteration of its internal structure, and finally disappear. On the other hand a cell less severely poisoned might show some loss of structure perhaps vacuolation and eventual shrinkage, and later recover and undergo hypertrophy to its normal size again. The slightest fluctuation upward of the H ion concentration of a cell will thus lead to gradual conversion of its proteins into amino acids. Acidosis therefore, whether local or general is the condition required for loss of tissue mass. If local or general acidosis could be prevented we should have the method of preventing local or general wasting and loss of tissue, simply because autolysis cannot go on in the normal alkaline reacting fluids of the tissues and the blood.

As we know, enzymes are catalytic agents. Catalytic agents should facilitate the progress of balanced reactions in either direction. A typical balanced reaction, like the reaction between a fatty

acid and glycerine to form a neutral fat or vice versa, depends for its direction and extent upon the active masses of the various reacting materials. Where the masses are in certain proportion the reaction will run toward synthesis. Where they are in another proportion the reaction will go toward hydrolysis or digestion. The enzyme which facilitates hydrolysis also will facilitate synthesis. Croft Hill demonstrated this fact when he showed the synthesis of isomaltose from glucose in the presence of maltase. Dr. Locvenhart at about the same time showed that liver lipase would produce the synthesis of an ester from its alcohol and acid, and Hamsick actually produced considerable amounts of fat from glycerine and fatty acids by using the lipase of the pancreas. There is every reason therefore to believe that the synthesis of proteins or their hydrolysis is facilitated by the same enzyme under the directing influence of the relative masses of protein, water, and amino acids. From this point of view we can offer some intelligible chemical explanation of hypertrophy, as well as of autolysis, atrophy and involution.

In the normal cell there is a large amount of non-available protein so long as the reaction of the cell is maintained neutral or alkaline. There is a small fraction of available protein and it is in equilibrium with the amino acids that are always present in normal cells. If the equilibrium existing between the available protein and the amino acids is upset by an increase of the available protein, digestion results. This is what happens with a local increase of acidity. On the other hand if amino acids diffuse into the cell from the blood, that increase of mass will also upset the equilibrium and produce synthesis of protein. If now the cell contains sufficient buffer salts this newly synthesized protein will be automatically converted into the non-available reserve protein of the cell, and the protein mass of the cell will increase. This is hypertrophy, and should be the natural consequence of extra amino acids in the blood following a protein meal.

If the cell grew too large it would be less well able to get rid of its metabolic waste materials, like CO_2 . These would again tend to start the reaction in the autolytic direction until the cell was again reduced in size to a point where it could effectually maintain itself in relation to its blood and lymph supply. Or the cell might divide into two, so that the effective surface of the mass of protoplasm

would be increased. In some tissues hypertrophy involves an increase numerically in the cells. In others it involves merely an increase of size. In either case there is a limit to the hypertrophy depending upon the blood and lymph supply, and a tissue is thus automatically kept in equilibrium with this supply.

In general therefore the condition necessary for hypertrophy seems to be alkalinity, while the condition necessary for atrophy is acidity. Many other factors doubtless intervene, too, but these two conditions seem to be fundamental to these chemical changes.

Let me apply this hypothesis to a few typical cases. 1. We have already described the atrophy of the phosphorus poisoned liver. The whole tissue goes to pieces because of the highly toxic nature of phosphorus to the liver cell, and the rapid development of acidity.

2. In chloroform poisoning the liver also atrophies. The atrophy is apt to be less severe however and the organ recovers unless the intoxication is too prolonged. Graham has recently shown that in CHCl_3 poisoning the liver paranehyma grows acid to indicators. He believes that hydrochloric acid is formed from the chloroform within the cells. This would of course result in autolysis.

3. After parturition the large uterus contracts, squeezes out blood and lymph and in the course of a few weeks atrophies to its resting size. The sustained muscular contractions of course reduce the blood supply to the cells. They will undergo partial asphyxia with its attendant acid production. The CO_2 and organic acids will be less effectively removed. The net result will be a local organ-acidosis with consequent autolysis and removal of the soluble products. Atrophy continues until the greatly reduced organ reaches a mechanical equilibrium with its blood and lymph supply.

4. The mammary gland atrophies after lactation. It is readily hastened by allowing some milk to remain in the gland. This residual milk means a certain amount of local pressure, diminished blood supply, local acidosis, and finally atrophy. Every farmer knows the bad effects of skipping even a single milking period on the milk production of a cow. The mammary gland, like the liver is highly sensitive to the slightest increase of acidity in its cells.

5. Muscle tissue is much less sensitive to increased acidity than gland tissue. It reacts however in exactly the same way. The decrease in blood supply to the inactive muscle is sufficient to lead to its gradual atrophy. Thus the arm kept in a sling for six weeks without exercise is invariably found to have undergone considerable atrophy. The process may be reversed by activity, leading again to hypertrophy of the muscle.

6. The brain is sometimes thought to be resistant to autolytic changes. As a matter of fact however it is exceedingly sensitive to increased acidity. It contains however so little protein framework that the measurement of its autolytic reaction must be made with especial refinement. Compared however with an equal amount of liver proteins it behaves very much as does the liver or mammary gland. The brain is an exceedingly active organ metabolically producing large amounts of CO_2 . Only a short asphyxia of the brain serves to destroy the integrity of its framework permanently, as is well known. The small amount and the delicacy of its protein mechanism allows it to quickly digest away under conditions of local acidosis such as develop in brain anaemia or asphyxia.

7. The rapid and striking atrophy and absorption of the mature tadpole's tail is believed to be associated with the growth of the bony pigostyle, cutting down the blood supply to the tail, and thus leading to acidosis and autolysis of the tissues.

8. The softening of rapid overgrowths and neoplasms is well known, and seems to be associated with a decrease in the blood supply to the softening areas.

9. The marked loss of tissue mass during fevers, general acidosis, anaemias, etc., may all be accounted for again in the theory here outlined.

10. The very slow autolysis of advancing age may also be determined by alterations in the blood supply, the gradual decrease of which would naturally lead to gradual reduction in the tissues maintained in equilibrium with that supply.

11. Rapidly growing tissues, neoplasms, local or general hypertrophies all are associated with an increased blood supply. It is of especial interest in this connection to note the recent paper of Miss Menten, in which she shows that in carcinoma the H ion of the blood is regularly low—that is to say,

the reaction of the blood in the cases she observed was more alkaline than the normal. While this point will need much more data before it becomes of real significance, it is at least suggestive from the point of view of the conditions favorable for hypertrophy in general.

How far can the clinician hope to control undesirable atrophic changes? This is a difficult question because the cases are seldom simple. Many other factors must be taken into consideration before one would care to hazard a guess as to therapy counter to atrophy. The clinician already does use therapeutic measures to combat acidosis. The feeding of fever patients with glucose, or sugar, or sweetened orange juice would certainly be helpful if the conditions otherwise warranted their use. The acidosis which develops from the imperfect combustion of fats can be met in such cases by increasing the supply of carbohydrates. The citrates present in the orange juice burn to alkaline residues which further tend to keep down the acidosis. The administration of bicarbonate is sometimes found valuable for localized as well as more general acidosis. Thus Graham found that the bad effects of chloroform on the liver could be largely eliminated in dogs by the feeding of alkali. Beyond these few suggestions of therapy that is already being used to advantage and is theoretically sound I should not dare go, before this society, since it is outside my field. With a better understanding of the mechanism involved in tissue losses, it is possible that counter therapy can be devised by the internist where other factors do not intervene to make it inadvisable.

DISCUSSION.

DR. A. S. LOEVENHART: I want to say just a word about one phase of the subject touched upon by Dr. Bradley.

Dr. Bradley's contribution to the subject of autolysis from the experimental standpoint, as I see it, has been the elucidation of the mechanism by which autolysis is accelerated by acid substances, and proves conclusively that acid substances, regardless of their nature, will accelerate autolysis. The proposition that he has brought out, it seems to me, that the effect of the acid is not upon the enzyme itself, but upon the substance upon which the enzyme acts is of vital importance in our conception of the mechanism of autolysis or self-digestion. It is of course difficult in ease of most proteins to observe any effect that the hydrogen ion concentration of acid brings about. However, in the case of a few proteins it is seen. It is commonly seen in the souring of milk. There of course it is perfectly obvious that

in this case the small amount of acid entirely changes the condition of the principal protein present.

The proposition that the acid acts not upon the enzyme but upon the substance digested, is of very vital importance.

With regard to what Dr. Bradley said about the synthetic action of the enzymes, while that has not been demonstrated in connection with these particular proteins, from the theoretical standpoint it must follow that the enzymes are reversible in their action under proper conditions, although we have not been able to realize these conditions in the test tube.

Dr. Bradley has brought out many valuable points to which this conception may apply. One fact that he failed to mention which I think is of considerable importance in this connection is the toxic action of the salts of the heavy metals on the kidney. Dr. MacNider, of North Carolina, has shown that it is impossible to produce a nephritis by means of the salts of uranium if alkali is given simultaneously. Dr. MacNider has shown, I think, that the autolysis of the renal epithelium is a result of an acidosis. He has shown that uranium salts will not produce nephritis if sodium bicarbonate is given in sufficient quantity to prevent acidosis. And still more recently Lewis and Rivers have shown that in the treatment of bichloride poisoning a very important part of the treatment, in order to obviate or lessen the severity of the nephritis following the chloride poisoning, consists in the giving of sufficient quantities of sodium bicarbonate to keep the urine alkaline. This is of course very simple treatment, and I feel that it is impossible to do harm by the administration of sodium bicarbonate if it is not continued beyond a point where the urine becomes alkaline. This may be a practical application of Dr. Bradley's proposition that autolysis is accelerated by acids and inhibited by alkalis.

DR. L. M. WARFIELD, Milwaukee: Mr. Chairman and Members of the Society: There is one point that Dr. Bradley mentioned at the very end of his paper, where it was shown that when chloroform was given to an animal autolysis of the liver, could be inhibited by the introduction of alkalis at the same time. This brings up the whole point of the prevention of acidosis, particularly when applied by those who are doing surgical operations. Dr. Farmer read a paper in the Medical Section this morning, in which this subject was touched upon, and here we have the subject in the General Session touched upon very much from the same viewpoint. I want only to emphasize that practically acidosis following surgical operations, that is to say, all the various symptoms that go with the term we use as acidosis, which are familiar to you all, can be and have been prevented by the administration, 24 or 48 hours before the operation, of sodium bicarbonate, juices of oranges or lemons, candy or sugar, which is of course the same thing practically, and large amounts of ordinary drinking water. I think if the surgeons in the state paid more attention to the two-day preparatory treatment instead of the sometimes hasty preparation of the patient that many lives might be saved which now are lost as the result of shock. I believe that this is a subject worth attention.

COMPULSORY HEALTH INSURANCE.*

BY A. E. FORREST,

VICE-PRESIDENT NORTH AMERICAN ACCIDENT INS. CO.

CHICAGO.

I do not hold with those who utterly condemn that little circle of the long-haired who made the initial effort to transplant from Germany to America a compulsory health insurance system.

They are but the Argonauts seeking the Golden Fleece, and like all explorers have their place in nature's evolutionary scheme. Columbus sought China. He was mistaken in his calculations but found a haven for the vast army of old world people whose nature demanded freedom.

The present advocates of Compulsory Insurance will fail to engraft on our present economic system the plan which they blindly advocate but they may sow the seed for a better appreciation of human value through an awakening of the humanitarianism characteristic of Americans. From the small misguided effort forming the subject before us may arise in place of the repressive, class-breeding measures advocated a well balanced preventive system of relief for the helpless.

Like most protagonists those urging the adoption of Compulsory Social Health Insurance are so obsessed with their view of the subject that they absolutely lack in perspective. They can see nothing but what they advocate.

Should a physician in this audience claim to be the late Dr. Murphy of Chicago and persist in that claim you would all agree that he was insane. His dementia would be only a little more pronounced than that of the advocate of Compulsory Social Insurance, in the form proposed, as a workable American institution.

The system proposes to introduce in this country compulsion and regulation of the private life of a class of individuals, in fact of two classes—the wage earner and the skilled physician. The Social Insurance advocate jumps to the conclusion that a law tolerated by the German people, worked like a piece of well oiled machinery from a central power station, Berlin, which deals almost exclusively with men of one nationality and temperament, would adjust itself to the shifting, polyglot population of the United States.

In speaking for Social Insurance a professor of law in one of our eastern colleges, the alleged author of the draft of a bill for an act submitted to a number of our legislatures, summed up his advocacy by saying:

“When Compulsory Social Insurance becomes a fact in the United States liberty of thought and action for the individual affected ceases.”

Mr. Wm. Hand in an article, “Who Keeps the Watch on the Rhine?” in the Metropolitan Magazine of March, 1916, in eulogizing what is considered the model of the sick funds of the German Empire—the Federation of Leipzig Sick Funds—says that it exercises a stern jurisdiction, in matters of sickness, over some 200,000 wage earners and whenever any one of its subjects falls sick it sends a listed and guaranteed doctor immediately to his bedside. It rushes medicines to him from a listed and certified drug store. If it cannot cure him in his home it drags him to a hospital and goes at curing him there. If he dies it provides money for his funeral. These things it does under general orders directly from Berlin. If you are an employer and elected to the “Committee” or “Directorate” although a busy man with large interests you are coerced into action and if you neglect your duties you are fined.

Can you visualize a power possessed by this State competent to enforce such a law? Can you imagine an I. W. W., a Non-partisan Leaguer, an American Federation of Labor or other powerful labor body tamely submitting to a dictation that would shake the foundation of their organizations and shift their leadership to a central politically appointed committee?

Will the medical profession take kindly to a law that must necessarily adopt some fixed system of remuneration for doctors' services? The argument is toward piece work which will bring the doctor on to a level with the applicant for sickness benefits in the periodical journey of both to the paymaster's desk. Will the high ideals of the medical profession suffer through a law that will name their masters, selected from among them, who will tell the panel doctor where and when to come and go and have his livelihood made dependent on the whim of a superior with power to remove or appoint? The well maintained code of professional ethics must with other liberty of personal action give way before Compulsory Health Insurance.

*Read before the Milwaukee County Medical Society.

When a Trotzky replaces a Gompers in the leadership of the mightiest of labor organizations, when the wildest politician in a State, who sports an M. D. after his name possibly as a sole qualification for the office, becomes a dictator to the medical profession then we shall have true Compulsory Social Insurance, bearing the brand "Made in Germany."

The germ of the idea is accredited to a well meaning college professor who visited Germany about 1905. He doubtless became impressed with the well ordered condition of the population and on his return exploited his views. Any visitor in Berlin or other important cities in the German Empire would be similarly impressed through a superficial inspection. He would naturally fail to take note of the repression, the grinding down of true manhood through espionage and force and the wonderful moulding into submission of a naturally aggressive and self-assertive people to an abuse of personal privilege. Long years of unquestioning obedience to discipline, not the least drastic of which is the German Social Insurance system, has wrought this miracle.

In support of this view let me quote the tribute paid to the system by Mr. James W. Gerard, for four years American ambassador at Berlin. Mr. Gerard says:

"The workingmen in the cities are hard workers. Probably they work longer and get less out of life than any other workingmen in the world. The laws so much admired, and made ostensibly for their protection, such as insurance against unemployment, sickness, injury, old age, and so on, are in reality skillful measures which bind them to the soil as effectively as the serfs of the middle ages were bound to their masters' estates. I have had letters from workingmen who have worked in America begging me for steerage fare to America and saying that their insurance payments were so large that they could not save money out of their wages."

It would be unfair to attribute to the incubation of the professor's Social Insurance germ anything other than a pure motive. We must, however, on a careful dissection of the whole question of Social Insurance as an institution to replace our present order of society recognize in the advocates such mental astigmatism as renders them dangerous leaders in a movement having for its object im-

provement in the condition of the impoverished, and endeavor to get the minds of those who will be affected at work to the end that if there is a modicum of good in the proposal it may be utilized; but we must not, because we find diphtheria in tenements in one street in Milwaukee, inoculate with antitoxin the back of every citizen of the state. It would be better to apply the remedy to those needing it, the infected and the exposed.

No normal minded industrious class of wage earners alone should be asked to support the hobo-minded or the slacker, the congenitally weak, the careless, or the vicious, constituting a considerable proportion of the population of all large centers and now the cause of our voluntary and enforced taxation for charity.

On a claim of economic waste through wage loss due to sickness is based the demand for Social Insurance. It is claimed that each wage earner loses nine days' pay per year. The United States Bureau of the Census in giving us these figures undoubtedly included many cases of unemployment as the census of California for instance gives only about a six day average loss. The more accurate statistics of Germany show the wage loss in the entire membership of the German Insurance Funds to be 9.19 in 1913.

Mortality rates in 1912 were respectively 13.9 for the United States and 15.6 per thousand for Germany, and we have no reason to expect better results from Social Insurance under conditions known to exist in our State Government than are shown under well known German thoroughness.

The plan offered in several legislatures presented nothing in the way of a wage loss saving. It provided expensive machinery for the extraction of \$7.20 from the wage earner, \$7.20 from his employer and \$3.60 from the general taxpayer to make good a loss of nine days at \$2.00 per day. Simple, but lacking in saving element. In the final analysis labor pays the \$18.00 and no experience tables have as yet been presented showing any saving in wage loss or any conservation of health to the credit of such Social Insurance systems as are in operation in European countries, entitling them to consideration here.

Some sanguine proponent of compulsion will tell you that once enacted Social Insurance laws may be amended to fit existing conditions. A thirty year trial of the system in a strictly governed country should be a sufficient test.

How are collections of funds enforced? With no property on which to levy, resort must be had to seizure of the person; possibly on the return of our victorious army the disgruntled employers of house servants, farm hands, together with bankrupt business men might be awed into "coming across," as they are in Germany through a show of force.

The extraction of money from the pay envelope of an American wage earner will certainly engender ill feeling between master and servant to an extent undreamed of today. Without labor well under leash, strikes would bankrupt industries as well as social funds or carriers, which are no more stable or scientific than a small assessment insurance association.

Labor in the United States drifts from city to city and state to state. Compulsory Social Insurance cannot be made interstate any more than can Workmen's Compensation under State Funds. An injury outside of the State handling the compensation fund is not recognized as it must be where a proprietary company is the carrier. This weakness must be tolerated so long as we enjoy State sovereignty. Elements of heavy expense and wastage must necessarily be present in the auditing and distributing of the State's donation from taxes as such donation cannot be held in one fund but must be pro-rated among the carriers. It is whispered that one State Compensation Fund in a State about the size of Wisconsin gives employment at present to over eight hundred people, an indication of wonderful possibilities in the line of job-letting in manning the operating machinery of a Compulsory Social Insurance scheme with the listed hospitals, listed drug stores, laboratories and other listed ramifications.

In speaking of the added burden which the proposed system would place on our already overcrowded charitable institutions we cannot find more illuminating words than those used by Mr. William Gale Curtis in addressing the Medical Society of the County of New York last January. Mr. Curtis says:

"National economy contemplates the continuous employment of the maximum number of wage earners, for the maximum number of days each year, therefore any plan that in its application will act as a handicap for many, and will inevitably debar some from obtaining employment, cannot represent economy. One wage

earner out of every ten would fail to pass physical examination. Imagine for a moment that you collectively represent the examining staff of every Mill, Factory, Dock, Yard, Office, Store, etc., in the City. Your employers have set up their standards for employment, and their instructions to you will average about the same. Now comes the string of applicants. Defective eyesight or hearing, hernia, varicose veins, anaemia, rheumatism, ankylosis, asthma, diabetes, eczema, and a dozen other disqualifying conditions, including old age, and in the matter of obtaining employment, 50 would be old. Every tenth man you examine is below standard, therefore rejected. Can you see the line of rejected forming and growing? Can you see every other place of employment turning them away? What becomes of them? Some of them find work somewhere at some wage, but suppose that three of every ten discards are refused everywhere, what is the loss? Three hundred working days each year for each permanent outcast. That means 120,000 outcasts in New York rendered ineligible by law, and the loss of their time will be exactly equal in days, to the loss of the 4,000,000 wage earners of the State at an average of 9 days each. Instead of making a saving of any part of the time already lost, the plan presents certain additional waste.

To confirm this feature, investigate any of the big industries that employ thousands of wage earners, and that have installed various forms of Social Betterment Departments. You will find that they have already set up physical standards, and that those who cannot qualify are turned away. At present this fact is not noticed because places of employment with social betterment features are few, but it is significant that they all demand physical standards, and with the advent of any general or compulsory plan, must come the discard class."

Probably one million Wisconsin wage earners would come under the provisions of the law proposed. A nine day wage loss at \$2.50 per day would give a total loss of \$22,500,000, 4 per cent of the wage figured as a minimum, would bring the cost of Compulsory Insurance to \$30,000,000. The taxpayer's 20 per cent would amount to \$6,000,000. There are approximately 7,500 State employes on which the State must pay an extra 40 per cent as

the employer, bringing the cost including that of supervision to at least \$6,500,000. In 1915 the State levied a tax of \$1,400,000 against real and personal property, consequently in adopting this Frankenstein you would be adding to your present considerable State tax burden 148 per cent.

In considering the advisability of the adoption of such a law the statement of Dr. Friedenberg, president of the Senate in the Imperial Insurance Office in Germany for over twenty years, that it is "a vicious circle of which charity, pauperism and fraud are the segments" should invite a very close study of the *entire* subject.

Physicians, wage earners, in fact all citizens should acquaint themselves with the details of the proposed law. Many are indifferent and many are deceived into thinking, as the name Social Health Insurance implies, that this is a simple State insurance plan with wonderful savings possibilities, present insurance systems considered.

As an instance of what a little light will do, the Eastern Underwriter informs us that at a labor federation meeting in California recently Michael Casey, of the Teamsters' Union, asked the direct question, "If a wage earner loses his job how long will his Social Insurance carry while he is out of work?" Dr. I. M. Rubinow, a professional proponent of Social Insurance, present, admitted that when a man ceases to be a wage earner he is no longer covered by insurance. Immediately following this the convention defeated a resolution previously considered favoring Compulsory Social Insurance.

Without the willing co-operation of the medical profession Compulsory Health Insurance would be impossible. Without the assent of any State medical body or any physician the law may be passed and the services of any or all physicians drafted.

The high class physician or surgeon conscripted and assigned a district, Chinese fashion, irrespective of the extent of his private practice or time devoted to research or study must become a part of the machine. Standards for determination of exemptions must be made and personal preference give way to legal obligation.

Doctoring becomes a trade, clamoring for the highest per diem or per capita fee to be obtained from the wage earners' pooling of earnings.

The commercial element must invade an honorable profession causing at least a partial abandonment of much needed research on special lines.

If in this State there are M. D.'s who have little remunerative practice or are more keen for business than for professional preferment, Compulsory Insurance is opportune as the magnitude of medical service and equipment necessary under such a system is immense.

For instance, as computed by the committee on Social Insurance of the Chamber of Commerce of New York, New York State would require 400 hospitals, 4,000 public doctors, 1,333 public surgeons, 800 public diagnosticians, approximately 25,000 special appointees as assistants, attendants, nurses, etc., making an addition to present State employes of nearly 35,000 appointees. The number of wage earners in Wisconsin being approximately one-quarter of those in New York State you may readily compute what your burden would be. Also, you may sense the accretion to the political party in power and what it would mean in the interest of perpetuation.

I would suggest to you a close study of the workings of the German sick funds. Any man may evolve an wholly erroneous theory, bolster it with reasoning in one direction until it looks like fact, but the only true test is practice. Read Dr. Ferdinand Friedenberg's pamphlet entitled "The Practical Result of Workingmen's Insurance in Germany." This best posted of observers of practice charges that State Insurance especially designed to replace pauperism and charity is itself merely pauperism under form and has fostered the evil of bureaucratic formalism—is a hotbed of fraud and a spreader of demoralizing practice and ways of thought among physicians and workingmen.

Even Herr Zann in his recent attempt to justify existence of the system says:

"In reality the poor expenditure, both as regards the number of beneficiaries and as regards the number of individual allowances has almost everywhere increased."

Mr. Bonar Law, Chancellor of the English Exchequer, says of the British National Health Insurance Act:

"There is not the least doubt that actually a large number of the poor or those who have the greatest need of our assistance do not receive the benefits although they are obliged to pay the contributions."

Dr. Frederick L. Hoffman, of Newark, N. J., presents in his pamphlet entitled "Facts and Fallacies of Compulsory Health Insurance" a splendid text book covering the subject.

An impartial report on Compulsory Social Insurance may be had from the Chamber of Commerce of the State of New York. The Insurance Economics Society, Majestic Bldg., Detroit, Mich., has devoted much time to research work and will gladly furnish the result of its investigations.

Such benefit as may come from an appreciation of the fallacy of many of the arguments in favor of Social Insurance made by its proponents impels me to recommend in addition to the works on the subject above named that you obtain and read the publications of the American Association for Labor Legislation of New York City, as your interest lies in the entire subject rather than in that part immediately affecting the medical profession.

Every good physician appreciates in his practice the importance of psychology, makes use of it even on himself through proper deductions, for instance, in the escaping of contagion, the endurance of physical strain through such mental adjustment as is impossible to the uninitiated layman. The same physician must have noted a tendency among his patients who are covered by insurance, either statutory or contractual, to indulge themselves—take it easy—with a growing tendency to repeat in the matter of disablement.

There seems to be a predisposition inherent to some extent in all human nature to malingering, using the word in a broad sense. Shall we in this day of national stress enact laws for the encouragement of dependence on others? Would it not be wiser to begin at the source of our weakness?

Examinations under our call for fighting men disclose an alarmingly large number of rejections for physical defects. Presently you will hear Compulsory Insurance protagonists say that their scheme will cure all this.

The defects found in men between twenty-one and thirty-one to a large extent were planted before the wage earning period. In my judgment they reflect on our lack of prevention and correction under our only real general compulsory experiment in the United States.

Our public school system is laxly carried on through the tortuous channels of politics—the natural route of any Compulsory Insurance system so

fat with political possibilities as is the system proposed.

Medical men must appreciate that the natural activity of early childhood tends toward a lessening on entering the teens into a period of physical laziness. Perhaps mental activity during this period is considered of paramount importance.

This is the time, however, when systematic exercise of the body should be enforced—when panel doctors, if we are to have that class, should be forced to examine frequently and periodically every school attendant for defects or predispositions. The answer is a lack of school funds furnished by the taxable body politic, where the burden is borne by all and yet we find ourselves considering an improvement in national health through a load to be borne by labor and the particular industry employer.

It would be well that morals courts remove and put at useful work at least the most glaring of young manhood's temptation—the female habitue sans virtue, forming a large proportion of cabaret and dance hall patronage.

Physicians should disabuse the minds of young men of the idea that a certain form of venereal disease is no more harmful than a bad cold. Low morality as a rule is the result of low mentality, and the mental leans hard on the physical.

Where can we find a better starting place for man-building than in the public school? The beginning of the wage earning period is too late a day for that work.

Social Insurance would cost wage earners and taxpayers at least \$1,000,000,000 annually. One-half that sum expended on a thorough building system throughout all the school period would bring army rejections of fifteen years hence to a small percentage of per cent day figures.

We would not then hear of Traumatic Neurosis or even Traumatic Hysteria, which under Social Insurance has become a common contributory affection when all other expedients for the milking of public funds have failed.

American insurance companies' records show an alarming increase during the past few years in the frequency of sickness and accident claims. The average of one claim per year from every seventh man insured found in 1911 has increased to one from every fourth policyholder in 1916 and the period of disability has also increased in that period fully 50 per cent.

It would not appear from Health Department reports that such an increase in sickness and accident disability is general, therefore it is reasonable to conclude that with Workmen's Compensation supplanted by other insurance covering loss of time the people are drifting into the same condition which authorities on the subject say is brought about by Social Insurance in Europe.

Insurance experience demonstrates that while many physicians in attendance upon the disabled honestly report conditions many others are extremely generous in the patients' interest, especially where State or corporation money is in question.

In this connection, a German writer commenting on the position in which the medical fraternity in the Empire is placed speaks of "the numerous cases in which a physician of probity renders an expert opinion unfavorable to the pensioned claimant, begging that the claimant in question be kept in ignorance of the opinion since otherwise the physician concerned would lose his practice while his neighborhood would be made too hot to hold him." This fitting tribute to the profession carries also its lesson in respect to the Compulsory system.

When the parturient world struggle now raging is over and our army returns many of them will never go back to their former stations in life and there will become necessary a great readjustment. A leveling process is being carried on and if the war extends over a few years the dreamer's idea of the distribution of wealth will have become a fact.

Organized labor is lending a willing hand in the strengthening of the nation, and thereby earning the right to its say in all matters of political economy.

Labor is the class for which benefit is ostensibly sought through Compulsory Social Insurance; can we not then safely await the war's sequential culmination before attempting any statutory replacement of our present established social system?

INDICATIONS FOR THE DAVIS CESAREAN.

BY R. W. ROETHKE, M. D.,

MILWAUKEE.

Since I cannot cover more than one small part of the subject of Cesarean section in my allotted time I have limited myself to the indications for the Davis type of operation. To refresh your minds about this operation I will say that it consists of a high small incision of four inches from the navel upwards, that there is little hemorrhage when perfect team work is employed, that the suturing is very simple, and that the entire time of operation varies from fifteen to twenty minutes. There is very little manipulation of the belly contents, little tendency for adhesions and very little chance of a weak abdominal scar. The mortality in uncomplicated cases is about one per cent and in cases with organic disturbances, long labors with much manipulation or local infections, the mortality runs from three to ten per cent.

It is not a last resort operation but is best and safest if you have made your determinations early. It has been repeated as high as six times on the same patient. The Saenger, the most commonly performed Cesarean, still has a place in case of necessary tumor removal or contraction ring, and the Poro still is the operation of ruptured or infected uterine musculature. The Sellheim, or modern transperitoneal-extraperitoneal is best where there has been much manipulation from below but the old type of extraperitoneal has no place at all. To discuss more fully these different types of operation would take too much time.

In general the indications for Cesarean have changed, especially since the Davis type has come to the fore. With our present surgical methods, the low mortality of the Davis under the proper circumstances, and the doing away with the last resort idea we no longer operate only those cases where birth is impossible by other means. The doubtful chance of a much damaged baby is sufficient excuse or to insure a live baby after successive losses in previous births. I will bring out the special points in my classification. Since most of my cases have had more than one complication I have selected a certain number and have borrowed a few from other men to fill out the full number of modern accepted indications.

If you shall take the right foot of a turtle, and hang it over the right foot of him that hath gout, it will give him great ease, and similarly the left foot, the left side; and the left fore-foot, the hand; and the claws, the fingers. And if you shall make a fire upon the outside of the shell of the turtle, if it be a green wood, then shall the turtle go out of his shell.—*Alb. Magnus.*

Case 12. Mrs. H. 35 years old. General contracted pelvis, $7\frac{1}{2}$ cm. outlet, and flat sacrum. History of one previous forceps delivery after five days of labor. Child delivered dead and mother paralyzed in both limbs for three months due to nerve pressure. Child's head in present instance too large to enter inlet. Cesarean without trial labor.

Case 4. Mrs. B. 34 years old. One child nine years old and still bearing forceps dents in its head. On examination I found a flat pelvis and a very long scarred cervix. The child's head floated above the brim of the pelvis and the parietal eminence projected to the anterior surface of the pubic bone. Trial labor failed as head could not be brought down sufficient to produce expulsive pains. Cesarean section.

Case 14. Mrs. K. 30 years old. Flat pelvis and child's head in same disproportion as in foregoing case. Child of ten pounds two years before by forceps, dead. Patient also had third degree tear. No descent of head in spite of active labor and normal cervix. Cesarean produced a nine pound child.

Case 26. Mrs. B. 21 years old and primipara. General funnel pelvis with $6\frac{1}{2}$ cm. outlet. Child's head too large for pelvic inlet. Cesarean at term without trial labor.

Case 8. Mrs. E. Age 25. Two previous children dead by forceps after three and five days labor respectively. Bladder and urethral injury after second delivery incapacitating patient for a year and requiring two repair operations. Funnel pelvis with broad pubic bone horizontal and child's head resting directly on bladder. Cesarean at term without trial labor.

Case 9. Mrs. F. 21 years old. One child dead by forceps. Pelvis identical with Case No. 8. Case was torn into rectum by previous delivery and also from the body of the uterus through the bladder and urethra. Two repair operations with only a partial result and much scar. Cesarean at term without trial labor.

Case 1. Mrs. M. 45 years old. Six previous children normally. Cervical and perineal repair before last pregnancy. Six days of labor without any progress. No dilatation and child's head too large to enter inlet of pelvis. Complete exhaustion

of patient not admitting time for the Sellheim operation therefore the Davis was done on account of speed.

Case 3. Mrs. B. 21 years old and primipara. Scar cervix due to old gonorrhoea and undilatable, myocarditis and threatening eclampsia. Cesarean after effort to dilate cervix failed.

Case 7. Mrs. E. 35 years old and fourth pregnancy. Previous children lost in delivery due to prematurity. Pelvis normal but cervix hard and two and one-half inches long. Breech position and absolutely no water. Cesarean by choice of patient to produce living child without taking any chances.

Case 10. Mrs. G. 30 years old and second child. First child dead by general disease. First delivery was normal but third degree tear including four inches of rectum resulted. Injury was perfectly repaired but the perineum had absolutely no elasticity. Cesarean was done to save repetition of injury.

Case 11. Mrs. K. 45 years old and one previous forceps delivery. Central placenta praevia and hemorrhage profuse. Pulse 140 and temperature 97. Cervix dilated one finger and head too large to enter inlet. This is the only section I did out of forty-five cases of placenta praevia.

Cases 15 and 24. Mrs. P. and K. Primiparae, 41 and 21 years respectively. Cases identical. No labor. Premature separation of placentae and hemorrhage just beginning to cause pulse rise in the mothers and irregular heart beats in the babies. No cervical dilation, nor softening. Cases were in hospital and by Cesarean we saved both mothers and both babies. For these cases I thank Dr. Beffel.

Case 16. Mrs. L. 24 years old and primipara. Funnel pelvis not serious. Ovarian cyst adhered in pouch of Douglas and size of baby's head. Albumen in urine, full term but no labor. Cesarean.

Case 17. Miss M. 21 years old, illegitimate primipara. Exophthalmic goiter and threatening eclampsia of low blood pressure type. Lower delivery impossible because of congenital tubular vagina that would admit one finger under great pressure. Cesarean at term without trial labor.

Case 18. Mrs. McB. 21 years old. One child lost by previous forceps. Pelvis normal. Cervix

very long and scarred extremely. Dry labor so violent that after seven hours uterus threatened to rupture and baby's heart went down to one hundred and was irregular. Cervix did not dilate at all. Cesarean as emergency.

Case 19. Mrs. D. 22 years and full term. Mother was not in labor but had been in convulsions for twenty-four hours. Cesarean as emergency and dead twins due to toxæmia.

Case 13. Mrs. H. 34 years and primipara. Toxic for a week, and seven and a half months pregnant. Patient not in labor and cervix long and not softened. Patient in state of change: Mind becoming more hazy, urine less and blood pressure rising. Patient had first convulsion while operating room was being prepared and continued for forty-eight hours. Cesarean as emergency.

Case 22. Mrs. L. 33 years old and one child dead by forceps. Pelvis normal. Former appendix operation in which right side of uterus was removed. At full term patient had space size of hand on right side of uterus which consisted of thin membrane and which would not stand strain of labor. Cesarean before labor to prevent rupture.

This case illustrates the necessity of Cesarean where uterine scars cannot be trusted to stand labor strain. It is dangerous to attempt a lower delivery on a case that has been delivered by Cesarean unless the delivery promises to be extremely easy. This was known very well as early as the seventeenth century.

Case 23. Mrs. P. 33 years old. Former child dead by forceps after long labor. Funnel pelvis capable of passing about a six pound child. Scar through uterine muscle due to removal of large fibroid. Scar incapable of standing labor strain under circumstances, therefore Cesarean before a labor to prevent rupture.

Case 30. Mrs. W. 26 years old and epileptic. Pelvis normal and first child alive by forceps after weak labor. Second pregnancy went three weeks over time in spite of attempts to start labor. Child's head got so large that it raised out of pelvis and rode on pelvis brim. Cervix stayed long and hard. Cesarean by choice of patient and twelve pound child delivered. This case is again pregnant and will require a second Cesarean before labor sets in as cervix is not of the easy dilatable kind.

Case 31. Mrs. G. 45 years old. Six children normal previously. Case referred by Dr. Kastner to our outpatient department of Marquette University. Cervix was hypertrophied to such an extent that it filled the entire pelvis and protruded from the vulva to about the size of a large grape fruit. It was hard for patient to urinate and to defecate. Cesarean because lower delivery was impossible.

Case 33. Mrs. M. 33 years old and primipara. Pelvis of pronounced spondylolisthetic type. Cesarean.

In the East I saw Cesareans done by Hirst, Davis, etc., for spit pelvis, Roberts and Naegele pelvis and for the various types of Dwarf pelvis. These types seem rarer in the Middle West. Davis also did a Cesarean for a case of cord presentation where the cervix was hard to dilate in order to save the baby. Cases of myocarditis were also considered justifiable Cesareans especially where they promised to have long hard labors.

CANCER OF EAR FOLLOWING FROST BITE. R. L. Sutton, Kansas City, Mo. (*Journal A. M. A.*, Dec. 29, 1917). calls attention to the frequent exposure of the ear, as well as the cheeks, to repeated frostbites. The frequency of such occurrences are appreciated only by a study of a number of case histories. Pusey has called attention to the important part dry seborrhea of long standing plays in the production of cancerous growths. Out of forty-six cases involving the ears and cheeks examined by Sutton within a year, twenty-seven give a history of frostbite and twenty-one of these presented one or more malignant growths on the affected areas. The majority were of the keratoid type and almost 90 per cent. were of the basal cell variety. In only three instances were the squamous cell varieties represented. Judging from his observation it would seem that repeated exposure to very low temperature tends to reduce local resistance to the malignant growths. The important prophylactic measure is adequate protection of the parts commonly attacked and, if keratoses develop, the frequent application of an ointment containing small amounts of salicylic acid may be tried. In some instances, double the proportion of sulphur may be advantageously added. In more advanced or frankly malignant cases radium usually serves admirably. In attacking squamous cell growths of the ears, especially if the lymph nodes are attacked, the physician will find radical excision the method of choice.

It is reported of the Philosophers that if the hide of an ass be hung above children they may not be terrified of anything.—*Albertus Mag.*

THE WISCONSIN MEDICAL JOURNAL

OFFICIAL PUBLICATION OF THE STATE MEDICAL SOCIETY OF WISCONSIN

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Annual Subscription .. - - Two Dollars Single Copies - - - Twenty-five Cents

Address all business communications to THE WISCONSIN MEDICAL JOURNAL, 504 Goldsmith Building, Milwaukee

Vol. XVI.

February, 1918

No. 9

EDITORIALS

PAY YOUR DUES!

Have you paid your dues for 1918?

Do you know that if they were not paid *before* February first you are not entitled to the protection against suits for malpractice?

Do you know that if your dues are not paid until *after* February first you will have lost any protection in suits that may arise out of your acts of commission or omission during the period from January first until the date on which those dues are paid?

If you have not done so, remit at once to the Secretary of your County Society.

The insurance is worth while. It may be your turn next.

HONOR ROLL.

The following societies made the Honor Roll by reporting a full membership by February first:

100% Class.

Calumet	Ozaukee
Lincoln	Portage
Marinette-Florence	Trempealeau-J.-B.
Monroe	

These deserve honorable mention:

75% Class.

Chippewa	Marathon
Columbia	Outagamie

Dodge
Douglas
Green
Jefferson
La Crosse
Langlade
Manitowoc

Price-Taylor
Sheboygan
Vernon
Washington
Waukesha
Wood

50% Class.

Ashland-B.-I.
Barran-P.-W.-S.-B.
Brown-Kewaunee
Crawford
Dunn-Pepin

Green Lake-W.-A.
Richland
Rock
St. Croix

Is your Society in the 100% class? If not, are you keeping it out by failure to pay 1918 dues?

RACINE PHYSICIANS ATTENTION!

A RECENT issue of the Racine Journal presents a brief summary of the activities of the Racine Board of Health. This item mentions the fact that Racine has had no epidemics during the past year, that the sanitary inspectors have kept the city clean and healthy, and that sickly babies were well taken care of at the summer camp. This is splendid work and the Health Department as well as the Racine physicians are to be congratulated upon the excellent results obtained.

BUT

Why did 45 people die from tuberculosis during 1917 when only 30 individuals were reported as having the disease?

Does the Racine Health Department mean to tell us that Racine with 40,000 inhabitants had but 30 living cases of tuberculosis during the past year? The millennium is not yet, and we do not expect to see all cases of tuberculosis on record, but we do admit surprise at the above figures.

The same item mentions the fact that "the discovery and isolation of a diphtheria carrier undoubtedly prevented a wide spread of this disease." How about the deadly tuberculosis carrier? Why spend so much time running down the comparatively harmless diphtheria carrier, while the careless tuberculosis carrier, one of the worst enemies of mankind today, is allowed to spread this fatal disease unmolested?

Section 1416-1 of the Health Laws of Wisconsin says: "It shall be the duty of every physician to report to the department of health in every town, incorporated village or city, in writing within 24 hours the full name and address of every person treated, visited or known by such physician to be suffering from any one of the infectious or contagious diseases following, to-wit: measles, scarlet fever, tuberculosis, etc." If it isn't worth while to report cases of tuberculosis simply because the Board of Health Laws say so, how about the great big law of humanity? How about your duty as a physician to your community, your patients and your own family? Is it necessary that your own home be invaded before you realize the importance of reporting this disease? Tuberculosis, the disease that, with the exception of pneumonia, causes more deaths than any other disease, is communicable and can be prevented; but to do so we must have a wide awake Health Department and the co-operation of conscientious and careful physicians. Wake up Racine! Here's hoping for a better report for 1918.

Other communities please take notice. Are you in the same boat?

MOBILIZING THE PROFESSION FOR WAR.

Until the entire medical profession of the United States, or at least those who are mentally and physically fit and within the age limit, are mobilized within the Medical Reserve Corps of the United States Army, not until then can we give to the Surgeon General that efficiency which he so badly

needs in having a large body of Medical Officers upon whom to draw.

You may never be called, at the same time your joining the Medical Reserve Corps and placing your services at the command of your country, clearly indicates the patriotism which the medical profession, as a whole, should evince and which we must manifest if we are to win the war.

Every doctor must realize that success depends upon a carefully selected and thoroughly trained body of Medical Officers. By careful selection, we mean the placing of a medical officer in a position where he is best fitted for the service, and only by having an immense Corps or the entire profession mobilized upon a war basis, can we serve our country to the best possible advantage.

This mobilization of the entire profession should come from within the body itself, but every physician coming within the requirements of the service, as to age and physical fitness, should seriously consider this suggestion and not wait for complete mobilization but apply at once for a commission in the Medical Reserve Corps of the United States Army.

It is not only for the combatant forces that medical officers are required but for sanitation, hospital camps, cantonments and in other departments where the health and life of the forces are dependent upon the medical officer.

We have within the profession a sufficient number of doctors to fully meet the requirements of the Surgeon General's Office whatever they might be, but to be of service you must join the Medical Reserve Corps to enable you to meet the appeal which is now being made for a large and efficient Medical Reserve Corps upon which the Surgeon General may draw as requirements demand.

RECENT RESEARCHES UPON THE EPIDEMIOLOGY OF PNEUMONIA.

THE Wisconsin Anti-Tuberculosis Association has called attention of the medical profession and its own membership to the steadily increasing pneumonia death rate, which, in Wisconsin, now exceeds that of tuberculosis. It has sought means of launching a public campaign with the co-operation of the medical profession in the hope that it might lead ultimately to as great a saving of life as has been accomplished by the popular

campaign against tuberculosis. Pneumonia has perplexed epidemiological students, however, because of the apparent omnipresence of the germ which appears in the mouths of healthy persons as well as in the mouths of pneumonia patients. If the following extract from Monograph of the Rockefeller Institute for Medical Research No. 7, October 16, 1917,* means as much as it appears to, and the promise those words hold out is fulfilled, certainly a tremendous reduction in the pneumonia death rate is to be hoped for.

In explaining the purpose of their study, the authors of the monograph say: "In view of the fact that a majority of healthy individuals harbor in the mouth an organism which has been, until the present time, indistinguishable from the pneumococcus causing pneumonia, the presumption has been fairly general that most pneumonic infections are to be considered autoinfections and that the important factor in determining the incidence of the disease is variation in susceptibility brought about by exposure or other accidental occurrences.

. . . At the Hospital of the Rockefeller Institute (R3, R51, R52) during the past few years an attempt has been made to find out whether in reality the development of the majority of cases of lobar pneumonia depends upon infection with the pneumococcus which the individual habitually carries in his mouth secretions, the immediate onset being caused by some factor which temporarily lowers resistance, or whether contact infection, either direct or indirect, plays a part of some importance."

A study follows of the types of pneumococci found in the mouths of healthy persons, in the sputum of pneumonia patients, in the mouths of persons in contact with pneumonia patients, and in dust. From the considerable number of cases examined, the following conclusion is reached:

"When all these observations are taken together, we have considerable evidence, contrary to the opinion previously held, that pneumonia, in a considerable proportion of the cases at least, arises by infection from without. This evidence relates mainly to the cases due to infection with Type I or Type II pneumococci, which organisms, however, are responsible for over 60 per cent of the cases. Pneumococci of these types persist for a limited time only in the mouths of patients who have suffered from the disease, and are very rarely, if ever, present in the mouths of normal persons who have

not been in immediate contact with such patients. Pneumococci are not infrequently found in dust, but those of Type I and Type II are practically never found except in the environment of persons sick of the disease or in the environment of carriers. Possible sources of infection of those who acquire infection with pneumococci of these types, therefore, are other patients suffering from pneumonia due to the same type of pneumococci, persons who carry these organisms during convalescence, persons who have acquired the organisms by close contact with patients (healthy carriers), and dust from the immediate environment of patients or carriers.

"We therefore now have evidence in regard to the mode of infection in pneumonia of these two types which affords a justifiable basis for instituting preventive measures. The conditions in regard to the other types of pneumonia are not yet sufficiently well known to justify discussion here."

The evidence that pneumonia is caused by infection from without has given rise to attempts at compounding solutions which will destroy pneumococci in the mouth secretion of pneumonia carriers and convalescents. Drs. John A. Kolmer and Edward Steinfeld† advise that, as the result of laboratory experiments, "the use of a mouth wash and gargle of ethylhydrocuprein hydrochlorid is suggested as worthy of clinical trial by those persons who have come in contact with cases of lobar pneumonia, and also by the patients themselves and persons suffering with measles or other infections favoring the development of lobar pneumonia." Since ethylhydrocuprein hydrochlorid is scarce, one of the commoner cinchonics, as quinin bisulphate or quinin hydrobromid may be substituted, although these are not as powerful pneumococicides. . . . "For washing the mouth and gargling, a solution is conveniently prepared after the following formula:

	Gm. or Cc.
"Ethylhydrocuprein hydrochlorid or quinin bisulphate	0.005
Liquor thymolis	5.0
Distilled water, sufficient to make.	50.0 "

DOROTHY PHILLIPS, W. A. T. A.

*Oswald, T. Avery; Chickering, H. T.; Cole, Rufus; and Dochez, A. R.: "Acute Lobar Pneumonia, Prevention and Serum Treatment," Rockefeller Institute for Medical Research, New York, 1917.

†"The Disinfection of Pneumococcus Carriers," Journal of the American Medical Association, Vol. 70, Jan. 5, '18.

THE NEEDS OF THE MEDICAL SERVICE.

Under the above caption, Lieut. Col. R. E. Noble, M. C., U. S. A., presented before the last meeting of the Southern Medical Association, a most admirable paper, which convincingly answers the many questions asked of the Department, and which have caused perplexing hours of thought with many doctors.

The communication appears in full in the December issue of the Southern Medical Journal and should be read by every doctor in this country.

In a previous paper by the same writer, presented prior to the time that the United States entered the world struggle, as in the above referred to communication, Col. Noble said: "On the medical profession rests a heavy responsibility, for with the medical profession rests the subject of medical preparedness."

This is a particularly impressive paragraph and pregnant with truth, and its meaning should sink deep into the heart of every doctor in America. What was a fact before we entered the struggle is more than a fact now, since we have joined forces with our Allies in a world war, and which will only be terminated by the success of our arms.

We have not a sufficient number of medical officers to care for the combatant and other forces now in training. With the new draft soon to be called and the possibility of the raising of an army of between five and ten million, as has been authoritatively foreshadowed, we would repeat "On the medical profession rests a heavy responsibility, for with the medical profession rests the subject of medical preparedness."

The responsibility of the medical profession of the United States and its importance in the successful outcome of the war cannot be too forcibly impressed upon every doctor who is mentally and physically fit and within the age limit, and they are urged to offer their services now.

That the Surgeon General should have an immense Corps of Medical Reserve Officers upon which to draw, enabling him to place the individual where he will be best fitted for the service is manifestly apparent. This will mean efficiency and by efficiency alone can the responsibility now resting upon the medical profession of this country be lessened.

Apply at once for a commission in the Medical Reserve Corps and thus relieve the responsibility

which you owe to your country, your profession and yourself.

ACCIDENTS FROM LOCAL ANESTHETICS.

IN another column we publish a letter from the therapeutic Research Committee of the Council of Pharmacy and Chemistry of the A. M. A. which we urge all to read and file away. This is a most important matter and should have the cooperation of every physician and surgeon.

No doubt some who read this will have had accidents of a more or less grave nature from the subcutaneous injection of small doses of one of the various drugs now used to produce local anesthesia. Such data drawn on uniform records from a large number of case reports, and critically analyzed should go far towards solving this problem which has given embarrassing moments to many an operating surgeon.

CONSERVATION IN THE PRESCRIPTION.

RECENTLY we had occasion to comment on the tendency observable around us to prescribe large bottles of medicines out of which only a few doses might be taken. The chief criticism was the waste.

Now comes along a very powerful incentive to keep down the amount of the prescription as well as the content of certain ingredients which are vitally necessary for us and for our allies in this war against the Central Powers. Almost all liquid prescriptions contain one or all of three ingredients: sugar, glycerin, alcohol. Of all these three there is a very definite shortage. We must save them in every way possible. There is one way we doctors can help in this conservation. We can give less medicine and we can substitute, if possible, medicines which do not contain these ingredients.

Instead of flavoring with cane sugar syrups, we can use glucose. Instead of alcoholic tinctures, we can use infusions or use the dried drug or the active principle.

Deny it as one will, there is no escape from the fact that we have very few drugs which exert a demonstrable reaction when administered. These few drugs can be given in active principle form almost without exception. One of the virtues of a

medicine (of which there are four, viz., it should have color, taste, odor, and be incapable of doing harm) is the pleasant taste. As a matter of fact the bottle of medicine containing no really active drugs is much more potent (psychically) if it is nasty and smells bad.

We therefore urge all the doctors to cease, so far as possible, the prescribing of medicines containing alcohol, sugar, and glycerin. We do not think that patients will suffer. On the contrary, if we can break some people of the medicine habit we shall have done them a good turn.

CORRESPONDENCE

This is a letter from one of the Wisconsin men serving in France.—*Editor*.

Belgium, 1st December, 1917.

Dear ———:

Have a brief spell before going to work and will try to give you some outward and visible appreciation of your letter which came this morning.

Your venture into the domain of surgical physiology and therapy is about the same as mine was previous to landing. Now I've got to state, that to date, the Carrel-Dakin method gives with proper surgery the best results. So far superior are they that I've never dreamed of such repair and so little discomfort. The big problem at present is how to get ahead of drainage. This can be done in perhaps 40% of the wounds by the most ruthless radical excisions, and early if not immediate closure. It can be applied to some fractures, which constitute the big group, but not all or even to a big minority. The system and methods of this place, evolved under the direction of Dr. DePage have really been proven. The French have adopted them and are getting today probably the best results of any army. Our methods will be based largely on these too. The British have a wonderful system, but it fails because of two things—the necessity of getting the wounded back to "Blighty" in the shortest space of time, and their organization that makes it impossible to have any unity of therapeutic endeavour. It is quite comparable to the rotations vs. full-time hospital services, of course they have a big lot more to do too. Tommy never lets Fritz alone. The French when they are not being driven or attempting a drive let things alone. They shell the trenches and the artillery posts daily but that is all. Fritz does the same. Tommy on the other hand keeps blasting away day and night, trenches, guns, roads, camps, dumps H. q., everything and everywhere. That keeps the wind up in Fritz and he "strafes" back. If you carry on that way you are obliged to have a bigger casualty list.

Now as to France. You tell the good people that think she is done, to thank God the U. S. haven't got to beat her single handed; of course she is tired and her best men have gone, that is also true of England and

especially so of Germany. But don't think there is nothing left or that she is done. If we had not come in as we did the Bolo Pashas and such would have pulled off a revolution there after the reverses of last April. Now if there be any French sentiment for an improper peace it is kept away in the background. I've seen the 1918 class being drilled for next Spring or at least a fraction of them. They will be fit and o.k. The same way in England, they have every man over here now that can be brought, till the Spring of next year. Those last Seven Divisions to which you referred were all supermen. Have met some of them and heard their stories. You have got to get them first-handed to realize their significance. As it is the surmise you made about Italy is justified. The Piave seems to be the limit, but see how they have shortened their lines. That and Russia will bring a lot of Hunns up this way where they are as thick as fleas now. The British think our men should be about the same as the first 100,000. They figure that 200,000 of Kitchener's men would count as 4 or 500,000 in the present state.

You see from that that they hope the U. S. will come in early and be aggressive from the start. Now that the end has been postponed by Russia and Italy, and, mind you, largely as the result of Hun propaganda worked through ecclesiastical channels, the British feel that the real stress is going to fall on Anglo-Saxon shoulders; and that actually we have got, from the U. S., to put in the punch that will blow off the lid that you expect to see arise. I agree with you there. Think you will see the Boche Navy make a forlorn sortie as a symptom of its advent. Don't take too much stock in the stories of rioting and starvation, those are like the bear stories from foot hill camps. Urgent as it may seem to you to stir up sentiment in ——— it can't be done till the casualty lists come home, and a few of the wounded too. Even you can't hate as you should. It has taken the sight and care of wounded women and children and the sensation of being bombed in an innocent town to get my hate going and I am only an amateur yet. Hate can't be just naturally called up on the phone and acquired by proxy. You have got to have personal contact with this hell business to get just a bit of the real thing started. Don't worry about our troops, they are getting a special hate education. Of course there will be spies among them, there still are in the British army. The great miracle is how they prevented Fritz from getting wise to the Cambrai push. Probably he had a tip and thought Haig was swinging the lead a bit. Anyhow you figure it out we can't get too many men over there too soon. This coast has got to be taken and it will take all there is of everything to succeed. Food conservation at home is no folly nor is the work for the army. It will all be needed and then some.

You may be interested to know that I met your old friend Bobinski. His work on these war injuries has been superb. A booklet on his so-called reflex paralyses (small superficial injuries, no direct involvement of nerves, hypertonus, redness almost like erythromelalgia, and intense muscular atrophy), is about due. I will send you one the next time I get back to Paris. The

treatment of all wounds save the lungs has been pretty well standardized. — will soon come along with his results or I'll choke him next week when I go to Boulogne to visit the British medical hospital there. Have been given the lung problem and its a terror. These traumata stir up spleen-like haemorrhagic infiltrations that mis-behave most scandalous in the physical signs, and even to the X-ray. The question of variations in the intra-thoracic pressure and its direct and indirect effects, the manner of repair, late dangers of expectant treatment especially in the presence of shell fragments, are all to be settled, and upon them hangs the rational therapy. Am glad to say that so far there has been a little encouragement for the working hypotheses I've had to adopt, that is the reason for the trip to Boulogne.

Am at present assigned by the Chief Surgeon U. S. A. to the Red Cross and by the R. C. to La Panne. When needed in the Spring will be called in by —.

By the way Finney has been put in charge of the actual control, with a board, of the surgical work in France. The officers of the regular army are to be executive and administrative, but the clinical work is to be done by and controlled by those who can do it. This is the most encouraging single thing that has come and means that the best will be done. A short time back this seemed impossible and now every one is bucking up and bucking down. On the whole everything is getting on as well and as rapidly as possible.

During a few hours interval that has elapsed since the above was written there has been a medical meeting especially for French and Belgians. The statistics of this hospital show that before they adopted Carrel-Dakin methods 5% of the fractured femurs went back to service. Now its over 50%. When you take the femur as the hardest of all of the compound fractures to treat, this is of itself quite a bit of evidence.

This Institution is run on the lines of a university hospital with no undergraduates, and it is a corker.

Yours, Etc.,

P. S.—Tell — I've seen the "ladies from hell" do everything but go over the top. No better troops exist. They are wonderful as patients, and have Fuzzy Wuzzy looking like a yellow quitter.

REPORTING OF ACCIDENTS FROM LOCAL ANESTHETICS.

TO THE EDITOR:—The Committee on Therapeutic Research of the Council on Pharmacy and Chemistry of the American Medical Association has undertaken a study of the accidents following the clinical use of local anesthetics, especially those following ordinary therapeutic doses. It is hoped that this study may lead to a better understanding of the cause of such accidents, and consequently to methods of avoiding them, or, at least, of treating them successfully when they occur.

It is becoming apparent that several of the local anesthetics, if not all of those in general use, are prone to cause death or symptoms of severe poisoning in a small

percentage of those cases in which the dose used has been hitherto considered quite safe.

The infrequent occurrence of these accidents and their production of relatively small doses point to a peculiar hypersensitiveness on the part of those in whom the accidents occur. The data necessary for a study of these accidents are at present wholly insufficient, especially since the symptoms described in most of the cases are quite different from those commonly observed in animals even after the administration of toxic, but not fatal, doses.

Such accidents are seldom reported in detail in the medical literature, partly because physicians and dentists fear that they may be held to blame should they report them, partly, perhaps, because they have failed to appreciate the importance of the matter from the standpoint of the protection of the public.

It is evident that a broader view should prevail, and that physicians should be informed regarding the conditions under which such accidents occur in order that they may be avoided. It is also evident that the best protection against such unjust accusations, and the best means of preventing such accidents consist in the publication of careful detailed records when they have occurred, with the attending circumstances. These should be reported in the medical or dental journals when possible; but when, for any reason, this seems undesirable, a confidential report may be filed with Dr. R. A. Hatcher, 414 East Twenty-Sixth Street, New York City, who has been appointed by the Committee to collect this information.

If desired, such reports will be considered strictly confidential so far as the name of the patient and that of the medical attendant are concerned and such information will be used solely as a means of studying the problem of toxicity of this class of agents, unless permission is given to use the name.

All available facts, both public and private, should be included in these reports, but the following data are especially to be desired in those cases in which more detailed reports cannot be made:

The age, sex, and general history of the patient should be given in as great detail as possible. The state of the nervous system appears to be of especial importance. The dosage employed should be stated as accurately as possible; also the concentration of the solution employed, the site of the injection (whereby intramuscular, perineural or strictly subcutaneous), and whether applied to the mouth, nose, or other part of the body. The possibility of an injection having been made into a small vein during intramuscular injection or into the gums should be considered. In such cases the action begins almost at once, that is, within a few seconds.

The previous condition of the heart and respiration should be reported if possible; and, of course, the effects of the drug on the heart and respiration, as well as the duration of the symptoms, should be recorded. If antidotes are employed, their nature and dosage should be stated, together with the character and time of appearance of the effects induced by the antidotes. It is important to state whether antidotes were administered orally, or by subcutaneous, intramuscular or intravenous

injection, and the concentration in which such antidotes were used.

While such detailed information, together with any other available data, are desirable, it is not to be understood that the inability to supply such details should prevent the publication of reports of poisoning, however meager the data, so long as accuracy is observed.

The committee urges on all anesthetists, surgeons, physicians and dentists the making of such reports as a public duty; it asks that they read this appeal with especial attention of the character of observations desired.

TORALD SOLLMANN, *Chairman,*

R. A. HATCHER, *Special Referee.*

Therapeutic Research Committee of the Council on Pharmacy and Chemistry of the American Medical Association.

Fill an egg full of the juice of agrimony, and give it unto the patient to drink, whom you suspect to have drank poison, and it will mightily purge upward all the poison; and with a wonderful facility healeth the biting of serpents and other venomous beasts.

THE INSURANCE COMPANIES AND THE DOCTOR.

AN INCIDENT OF DAILY HAPPENING, AND SOME CORRESPONDENCE.

On or about the fifth day of this month (January) a man who had been ill of some slight ailment, called upon me and asked that I give him a certificate that he had been sick, for use with some benefit society. This I did. He then presented a blank report of a Life and Casualty Company doing business in Minneapolis, and desired that I carry out its demands, namely, I was to fill in the answers to a large number of questions, about many of which I had no knowledge, and then go to a notary and take oath to my statements. Nothing appeared as to who was to pay the notary. This blank and its concomitant duties, I refused to fill out or to undertake, and I told the applicant that he might inform his Life and Casualty Company that I had so refused.

A few days later, I received from Minneapolis a letter and a new blank from the Life and Casualty Company, demanding that I at once fill out the blank and fulfill its other provisions and return it to the said Company.

I then wrote the Company, and the correspondence hereafter follows. It tells its own story.

Is it not time, in view of the mistaken notions that are entertained by insurance men, as to the functions of the medical profession in relation to the Insurance Companies, that medical men took a stand in this matter; and demanded that they be paid by the Companies, for all this paper work, that is so constantly thrust upon them, and for which they get nothing from the parties who most benefit from their unpaid services, namely the Insurance Companies?

From the Life and Casualty Co.

Minneapolis, Minn.

January

10th

1918.

Mr. Maurice Manchester Brown, M. D.

301 Iron Block Bldg.,

Milwaukee, Wis.

Dear Sir:

We have before us your brief notation in response to our letter of the 8th instant in reference to the disability of John Scheek, 615-17th Street, Milwaukee, reading as follows to-wit:

"When your Company shows me any good reason why it should expect me to be its unpaid clerk, I may be willing to pay the expense of practicing medicine for its benefit."

Your position is unique. You certainly stand out in conspicuous isolation from all other members of your alleged profession. You are an enigma, a puzzle problem far beyond our power of solution. We do not expect you to "practice medicine for our benefit." We do not expect you to be our "unpaid clerk." We had no reason to assume that you are an individual of such extreme self importance as to distinguish you from all others of your profession. We simply acted upon the theory that you were a real physician, conforming in your personal and professional habits to the generally approved ethical principles of your profession. We assumed that you might be agreeable to extending your patient the same courtesy other physicians invariably extend to their patients.

Your attitude forces us to the unavoidable conclusion that in assuming you to be as other men, a normal individual and conforming to the same customs that other physicians conform to that we were mistaken.

We now understand you are wholly unwilling to extend one of your patients a simple personal courtesy. You refuse to give him a statement of fact with respect to your professional relations with him, which statement is quite necessary under his contract with this Company, and we believe under the laws of your State to the completion of his proofs of disability in substantiation of his claim for indemnity.

We are of the opinion that your attitude in this matter should first be carefully reviewed by yourself for your own sake and with due regard to your standing as a self respecting man and as a fit member of your profession. If you shall find yourself incapable through careful self analysis of revising the strange abnormal conclusions to which you seem to have arrived, then perhaps it might be advisable to have the position you have taken in this matter generally known to all Life and Casualty Companies, to the other members of your profession, to the public at large and particularly to the officers of the State of Wisconsin, charged with the duty of supervising, not only medical practice in your State, but also the conduct of Insurance affairs in your State.

We presume it will be agreeable to you for us to inform Mr. Scheek that you have refused to extend him the usual courtesy of making final statement to this

Company in his behalf. Incidentally it occurs to us that with the assistance of a good attorney, Mr. Scheck might find some way under the laws of your State to compel you to give him a simple statement of fact according to the blanks printed and furnished by this Company for that purpose.

Yours very truly,

Z. H. AUSTIN,
President.

To the Life and Casualty Co.

Milwaukee, January, 1918.

Mr. Z. H. Austin, President.

North American Life and Casualty Co.,
Minneapolis, Minn.

Dear Sir:

I wish to thank you most heartily for your esteemed favor of January 10th, 1918, especially as it is a treasury of information that I have long sought to obtain, namely, an expression of the attitude of the Insurance Companies toward the profession of which I am an humble member.

Your letter indicates that your power for assuming, is a very well developed one. What you may or may not assume is of no consequence in as much as no where in your letter can I find any demonstration of any reason why I should be the Insurance Company's "unpaid clerk". Instead I find much scolding, much lecturing, unmasked advice, a veiled threat and a curious claim on your part, to be the final judge as to what is "the normal". This latter I take to be a definite evidence of approaching paresis, or of senile delusions of importance.

Nothing that I have received up to the present time, from any authoritative source, has so well defined the arrogance and presumption of the men of your occupation, as has this gem of peremptory scolding, from the hand of the President of what I presume is a large, influential, and wealthy corporation, doing an insurance business, and endeavoring, as is the custom among insurance companies, to do the medical men at the same time.

You at the head of this corporation, are less fortunate than you consider me to be (see your letter), for your "position" is not "unique" nor do you "stand out in conspicuous isolation", for the same effort that you are making to get members of my profession to give you information, valuable to you, for nothing, is common to you, your and most other insurance companies, dead-beat patients, confidence men and others of the same general class of short-change artists and bunko-men. Accept my condolences.

You consider me to be "an enigma". My Dear Mr. President: give it up. Your capacity for obtaining things of value, a capacity quite common to men of your class, from men of my profession, without remuneration or return, so far overbalances your capacity for solving so simple an enigma, as the one placed before you by me, that I cannot hope that you will ever solve it. One cannot make a silk purse out of a sow's ear. So spare yourself the trouble, and turn your mind to other things more within your capacity.

I have not assumed myself to be "an individual of such extreme importance as to be distinguished from all others of my profession". I am only an humble follower of the healing art, but as such, presuming that "the laborer is worthy of his hire", I refuse to supply you or your company with my knowledge, experience, time or even stationary, on your demand, so that you may be protected against false claims on the part of the men whom you have insured, and further I refuse to give you even the time it would require me to hunt up a notary, before whom to take an oath as to a report made for you, or to pay a notary for his services, for your benefit, or in any way to be your servant, clerk or assistant in carrying on any part of your business, without proper remuneration from you.

Whatever may be the nature of the contract you have made with your Mr. Scheck, for a consideration, you have made no contract with me, nor have I made any with you, and your overbearing presumption that you have a right to my services, is a form of impertinence that I will not countenance.

Insurance companies are prepared to pay physicians for examinations of prospective candidates for insurance, but they seem to found their rates of premium upon a basis that does not include payment for the medical information which is so important for them at the time of settlement of claims, endeavoring to dead-beat such information out of the medical profession, the members of which are too often brow-beaten into submission to the orders of the insurance companies, for fear of losing friends; and by just such autocratic processes as you have attempted to use upon me.

That sort of thing may do for the great majority of the chicken-souled, timid and unfortunately under-paid members of my profession, but there is reason to hope that the process will not be a successful one as between the men of your trade and the men of my profession, very much longer. Already on every hand the medical profession is protesting against this and other impositions on the part of the insurance companies, and as there is no legal process by which you can force the physicians to continue their unappreciated courtesies of the past, the insurance companies will soon be obliged, either to reduce premiums so that the insured man can get the worth of his money, or provide,—and that in the body of the contract between the company and the insured,—for a reasonable fee to the medical man who furnishes the information, that makes it possible for the company to settle with the insured, without fear of being cheated by the latter.

As the conditions are today, in many instances, the medical man being the friend of the claimant, and by no means a friend of the company, is far more apt to let his report, in case of doubt, take a complexion more favorable to the claimant than to the company. That is human nature. The medical man sees possible benefit in the way of future patients from the influence of the claimant among his friends, and sees no immediate or future benefit to himself from the company. In fact if I am to judge from the indignation expressed by the majority of medical men whom I know, as to this imposi-

tion of unpaid clerkship upon them by the insurance companies, there is neither respect nor co-operation to be expected from them, and the testimony of many, in the reports of injury that are made by them in these cases, are, I fear, not worth the paper they are written on. Can you blame them? You want valuable goods, which you need in your business, and you bluster, scold and insist that you are entitled to have them for nothing, and you get just what you pay for; no, not even that, you often get worse than nothing, and it serves you quite right.

There is no factor of courtesy in this matter in any way. It is an hold-up, straight and simple on your part. A matter of crooked business in which you sponge something out of the medical men as you think, for nothing, and in the end you get just what you deserve. The medical men do it with curses for you and your methods, and if curses are courtesy, you are most politely treated; but why should you care about that as long as you dispose of your gold brick, at the cost of time and trouble to the medical man?

As a matter of courtesy to Mr. Sheek, I gave him a certificate as to his illness, for some society to which he belongs; but I refused to make out papers for your company, and to then leave my office and my patients, to look up a notary,—who must be paid,—in order to swear to the papers that were of no interest to me, and for filling of which I was not to be paid by you. Your quarrel is with yourself and your mistaken view of the functions of medical men.

You may with perfect justice ask, why I was willing to give Mr. Sheek, this certificate for his society and was not willing to fill in the blank for your Company. It is very simple. Mr. Sheek is evidently a poor man. His sick-benefit society asks only for a certificate that he has been sick under the care of a physician for a certain time. That and that only.

Your company demands the answers to a long array of questions, many of which God Almighty Himself could not answer, and then after the blank has been filled in, you demand that the physician shall spend time and money in procuring the attest of a Notary, who if he has any self-respect, does not work for your Company for nothing, and all of these demands are for your Company's benefit only.

Although Sheek has paid a premium, in order that he may have a certain indemnity in case of injury, your method not only forces him to pay more money, which he can ill afford, in order to obtain his just due if he pays for his certificate himself, but it brings into the matter two men who either do their work for you for nothing, and who have no interest in the case at all, and who if they are paid by Sheek, are taking from him money which it is manifestly your duty to pay, as you are not in the insurance business for your health. Any way you look at it, your process of paying indemnity, takes a secondary tax out of someone, either the claimant or the doctor, and often the notary as well, from which tax your company and you profit. Why should Sheek, or the doctor, or the notary, or any of them help to fill your pockets? Especially the doctor who must

do it by robbing Sheek,—who has already paid you,—that you may benefit.

You have presumed to offer, unasked, an opinion, as to what I ought to desire. (See your letter.) What your opinion in this matter may be, is of the least possible consequence to me,—but you will permit me, as you have presumed to advise me—a little later to return the compliment.

Your homily in your letter as to "standing in my profession and self respect", is a thing to make the gods laugh. It will give me the greatest delight to have the Life and Casualty Companies, know all about it, and for that reason, I shall not only publish your letter, but also this, my answer to it, in the Medical press, and see to it that the restlessness among my medical colleagues as to the conditions under discussion, is in every way increased, and that if possible, the decent men, and men of professional standing, unite in refusal to be the unpaid clerks and understrappers to the autoeratic presidents of insurance companies.

Permit me to suggest that you also publish your letter to me, and mine to you, with the rest of the story, in the Insurance journals, and perhaps there may be enough light thrown upon your position in this matter to lead to a more just arrangement of the conditions under consideration.

It is high time, Mr. President, that you wakened to the consciousness, that your exalted office is a dangerous responsibility, and perhaps you had better insure yourself against approaching megalomania and delusions of grandure, symptoms of which are very manifest in your charming letter. There will be no charge for this advice. I give it as I would a dime to a beggar, and be assured, my good man, that your letter shows that you need it.

It is a matter of no consequence to me what need your claimant may have for papers demanded by you, that you may complete your contract with him. The problem is, do you, that is your company, propose to pay me for values, that you must have from me in order to carry out your contract with him. Beyond that I have no interest in the matter. Had I a contract with you in regard to this or any other matter, I should live up to it. But I have none, and neither you or anyone else can force me to give up my time, money, or service, without my consent or without remuneration.

I regret to note that there seems to be one "rift in the lute" of your otherwise charming brochure. A portion of it takes on the character of a threat for the purpose of obtaining benefit. Such a threat is actionable under the laws of this State as well as under those of your own. I sympathize with you in this matter, while thanking you for the material and the desire you seem to have that your attitude be made public, and conveyed to the medical profession at large.

Does it occur to you that I have as much right to expect that your company should pay me indemnity, because it is an insurance company, should I receive a personal injury, although I hold no policy in your company, as that your company should expect me to do anything for it, without remuneration, because I chance to be a physician?

So sing your little song of information to "all Life and Casualty Companies, to other members of your (my) profession, to the public at large and particularly to the officers of the State of Wisconsin, charged with the duty of supervising not only medical practice in your (my) State, but also the conduct of Insurance affairs in your (my) State", as long and as loud as you may choose, and if you like, sing it to the "lascivious pleasings of the lute", and I shall continue to enjoy life, health and happiness, in knowing that none of your song, or its accompaniment can seduce from me information needed by you, except you provide for payment to me for that information and service. And so far as it may lie in my power so to do I will endeavor to show my colleagues their stupidity in being willing to contribute to the profits that go into the pockets of the insurance companies, and the salaries that the presidents draw, by giving their time, knowledge and service to your company, and other companies, for nothing.

I have the honor to subscribe myself,—and for the love of Heaven, please note that my name is no more Maurice than yours is Zany,—with the assurance of my most esteemed consideration,

HORACE M. BROWN, M. D.

HMB:RK.

ABSTRACTS

ARSENIC AND THE MENINGES. J. H. Barbat, San Francisco (*Journal A. M. A.*, Jan. 19, 1918), has studied the penetration of the meninges by drugs intravenously and intraspinaly injected. From a careful study of the literature, he finds that only in a few instances have investigators been able to recover arsenic in the spinal fluid after its intravenous administration, and never after intramuscular or oral administration. The only important drugs that have been found to pass through the meninges and the ependymal cells are hexamethylenamin, uranin, chloroform, and in one case reported by Rotky, bromin. A review of some of the reports of the literature shows that the presence of arsenic in the cerebrospinal fluid is variable and needs explanation. Under normal conditions, we may assume that the meninges and the ependymal cells are practically impermeable to passage of all but a few drugs. What causes this impermeability? In 80 per cent. of the cases cerebral meningeal irritation accompanies the acquired permeability. The writer holds that it can be further increased by reducing the spinal pressure. The removal of the larger part of the fluid, he maintains, must create a congestion and if the capillaries are dilated, their contents will move with greater freedom. He has been able to demonstrate definitely that, in twenty-five out of twenty-six cases, arsenic is found in the cerebrospinal fluid twenty-four hours after its intravenous administration, if the spine is tapped almost dry shortly after the salvarsan or a similar product is given. He describes the technic which he employed as follows: "The patients were given intravenous injections of either salvarsan, neosalvarsan

or arsenobenzol. Within twenty minutes the spine was tapped, and the fluid was allowed to run until it barely dropped, the quantity varying from 30 to 60 c.c. The fluid was collected in two portions. The first was tested for colloidal gold, Wassermann, Pandy, Nonne and Noguchi reactions, and the second portion for arsenic. In ten cases, 20 c.c. of blood were withdrawn within half an hour after the administration of the arsenic. This was allowed to clot, the serum was removed, and both clot and serum were tested for arsenic. Twenty-four hours after the spine was tapped, a second tapping was done, removing at least 10 c.c., though usually twice that amount was removed. This fluid was also examined for arsenic." Analyses of the blood serum showed that it contained more than five times as much arsenic as the clot contained and that it averaged only about eight parts per million. Within half of an hour after the administration of 0.4 gm. of salvarsan, 75 per cent. is fixed in the body cells. The second portion of spinal fluid, withdrawn just after the administration of the salvarsan showed 31 per cent. of arsenic free and 27 per cent. with a trace, while 42 per cent. gave an average of 0.2 part per million. The spinal fluid, withdrawn twenty-four hours later, showed one case out of twenty-six arsenic free, two cases with a trace and an average of 0.25 parts per million in the remaining twenty-three cases. These figures would indicate that by means of this technic, arsenic can be made to pass into the spinal fluid in more than 96 per cent. of patients suffering from tabes or paresis. There has not been as yet a sufficient number of patients tried to warrant any definite statement as to the clinical value of the method, but the writer thinks that his results in absolutely hopeless cases indicate that a more extensive trial might be of value. He relates instances of improvement after the treatment. There was little complaint from the patients on account of the withdrawal of large quantities of the fluid, and the headaches that followed were no worse than those after the removal of small quantities. He thinks the method has many advantages over that of Swift and Ellis and the clinical results will be found as good, if not better.

NEODIARSENOL. E. P. Zeisler, Chicago (*Journal A. M. A.*, Dec. 29, 1917), discusses a recent series of twenty intravenous injections of neodiarsenol, a recent substitute for neosalvarsan marketed by a Canadian firm, which he gave to patients in all stages of syphilis. He observed an unusually large percentage of severe reactions, such as fever, headache, vertigo, vomiting, nausea, faintness, thoracic oppression sometimes extremely alarming, at least it was in one case. On account of his unpleasant experiences in the use of neodiarsenol, he has ceased to use it and has since employed the French preparation, novarsenobenzol (Billon), which has given satisfaction.

It is said that if you take the left thigh bone of a male ostrich, boil it with oil and then let those places that be subject to the growth of hair be rubbed therewith, then shall no hair ever again grow in that place.—*Ex Lib. Cleopatrae.*

THE STATE MEDICAL SOCIETY OF WISCONSIN

ORGANIZED 1841

Officers 1917-18

G. WINDESHEIM, Kenosha, President
OSCAR LOTZ, Milwaukee, 1st Vice President
T. W. NUZUM, Janesville, 2nd Vice President

CARL DOEGE, 3rd Vice President
ROCK SLEYSTER, Waupun, Secretary

DANIEL HOPKINSON, Milwaukee Ass't Secretary
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Councilors

Table with columns for Term Expires (1923, 1919, 1921, 1922) and Councilors (1st Dist., 2nd Dist., 3rd Dist., 4th Dist., 5th Dist., 6th Dist., 7th Dist., 8th Dist., 9th Dist., 10th Dist., 11th Dist., 12th Dist.)

Delegates to American Medical Association

H. M. BROWN, Milwaukee; ROCK SLEYSTER, Waupun; C. H. LEMON, Milwaukee

Alternates

W. E. BANNEN, LaCrosse; T. W. NUZUM, Janesville; WILSON CUNNINGHAM, Platteville

Committee on Public Policy and Legislation

EDWARD QUICK, Milwaukee, Chairman; J. P. McMAHON, Milwaukee; L. H. PRINCE, Madison

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SPENCER BEEBE, Sparta; J. M. BEFFEL, Milwaukee; EDWARD EVANS, LaCrosse

Program Committee

Table with columns for Medical Section, Surgical Section, and Eye, Ear, Nose, Throat Section, listing members and their roles.

The Wisconsin Medical Journal, Official Publication

LIST OF EXECUTIVE OFFICERS OF COUNTY MEDICAL SOCIETIES.

Large table listing County, President, and Secretary for various Wisconsin counties including Ashland-Bayfield-Iron, Barron-Polk-Washburn-Sawyer-Burnett, Calumet, Chippewa, Clark, Columbia, Crawford, Dane, Dodge, Door, Douglas, Dunn-Pepin, Eau Claire, Fond du Lac, Grant, Green, Green Lake-Washara-Adams, Iowa, Jefferson, Juneau, Kenosha, La Crosse, Lafayette, Langlade, Lincoln, Manitowoc, Marathon, Marinette-Florence, Milwaukee, Monroe, Oconto, Oneida-Forest-Vilas, Outagamie, Ozaukee, Pierce, Portage, Price-Taylor, Racine, Richland, Rock, Rusk, Sauk, Shawano, Sheboygan, St. Croix, Trempealeau-Jackson-Buffalo, Vernon, Walworth, Washington, Waukesha, Waupaca, Winnebago, and Wood.

SOCIETY PROCEEDINGS

TREMPEALEAU-JACKSON-BUFFALO
COUNTY

BROWN-KEWAUNEE COUNTY

The Annual meeting of the County Medical Society was held at the Beaumont Hotel, Green Bay, Wis., on Jan. 19, 1918. Following the banquet a business meeting was held, during which, officers for the year were elected. Dr. A. O. Olmsted, president, Dr. C. O. Latham, vice-president, Dr. E. G. Nadeau, secretary-treasurer, Dr. I. E. Levitas, delegate, Dr. H. Hendrickson, alternate, Dr. F. L. Criklaire, censor.

The meeting was addressed by the retiring president, Dr. L. E. Levitas, and by a few of the older members of the society, including Drs. B. C. Brett, R. E. Minahan, and A. W. Slaughter.

LANGLADE COUNTY

Meeting was held at the Hotel Butterfield, Dec. 22, 1917. After supper was served a business meeting was held revising the question of fees and the election of officers. President, E. J. Donohue; vice-president, L. D. Steffen; Secretary and treasurer, J. C. Wright; censor, C. W. Moore. Dr. J. C. Wright was chosen delegate to represent the Langlade County at the State Medical Society.

MANITOWOC COUNTY

The Manitowoc County held their annual meeting, which they decided hereafter to hold at 8 o'clock in the evening instead of in the afternoon, as was customary, and elected the following officers: President, W. G. Kemper, vice-president, J. R. Currens, Two Rivers; secretary-treasurer, Louis Falge. Trustee for three years, J. E. Meany.

OUTAGAMIE COUNTY.

The Annual Meeting of the Outagamie County Medical Society was held at the Y. M. C. A. Building, Appleton, on Tuesday, Jan. 15, 1918. A banquet was held. Dr. Warfield of Milwaukee addressed the Society on Facts and Fallacies in Blood Pressure.

SHAWANO COUNTY

The annual meeting of the Shawano County Medical Society met in the directors room of the First National Bank. The only physician present from out of town was Dr. Krebs of Cecil. About the same officers as last year were elected, being Dr. Gordon, president; Dr. Krebs, vice-president; Dr. Cantwell, secretary and treasurer, and Dr. Cantwell was elected delegate to the state medical society, and Dr. Ragan alternate. Dr. Stubenvoll was chosen director for three years and Dr. Schroder for two years.

The annual meeting was held on December 20th at the Arlington Club, Winona, Minnesota. The meeting was called to order by the president, Dr. G. F. Stack, Independence.

Reports by the secretary-treasurer and delegate was read and accepted. The meeting voted to pay the dues of all members who have enlisted or have accepted a commission by January 1, 1918. Dues were raised from \$4.50 to \$5.00 per year.

The following officers were elected: William Belitz, Cochrane, president; O. Mork, Blair, vice-president; C. F. Peterson, Independence, secretary-treasurer; C. F. Peterson, Independence, delegate; J. Paul Reinhardt, Fountain City, alternate; G. F. Stack, Independence, censor.

NEWS ITEMS AND PERSONALS.

The Milwaukee Base Hospital No. 22 has had its personnel increased from 153 to 200. Col. Thomas J. Kirkpatrick, M. C., commands the unit.

The Base Hospital has received many gifts from generous Milwaukeeans. Two motor cars were recently donated by Harry Schleisinger, and the Harley-Davidson Company. A seven-passenger Hudson car was donated by Mrs. Robert Nunne-macher.

It is expecting to sail across the water within the next few weeks. The adjutant of the hospital is First Lieut. Thomas L. Gore, M. C.

CAPT. EUGENE A. SMITH, M. R. C., has been called to New York to take a course in special X-ray work.

DR. C. C. DEL MARCELL of Neenah is First Lieutenant with the Wisconsin National Guard. He expects soon to sail for France.

LIEUT. IRVING A. MEYERS of Cottage Grove is now stationed at Camp Custer, Battle Creek, and has recently been promoted to Captain.

DR. H. F. SETHENY of Menomonie who has been at the training camp at Camp Sheridan, Montgomery, Ala., received a commission as Captain, M. R. C.

We are informed that the percentage of men rejected by the examiners for the draft army for physical reasons ranges from 30 to 70 per cent, and is higher than any other country. According to

Prof. Fisher, the percentage in France has averaged 30 per cent for more than one hundred years.

DR. JAMES RUSSELL EASTMAN of Kenosha has been commissioned a Captain in the M. R. C.

DR. GEORGE C. RUIHLAND who has returned from Camp Fort Sill, Oklahoma, has been reappointed Health Commissioner of Milwaukee, and took the oath of office on the first of the year.

DR. LEO McNICHOLAS, Athens, is at the Great Lakes Naval Training Station.

A telegram from France announces the safe arrival of Dr. Clarence A. Baer of Milwaukee, who went in charge of a Red Cross Hospital Unit.

PRESIDENT WILSON has ordered that First Lieut. Albin A. Krygier, M. R. C., Wisconsin National Guard, shall be honorably discharged from the army.

DR. O. A. NELSON and DR. G. F. ANDREWS, both formerly of Birchwood, have received commissions in the medical corps and expect to be assigned to duty soon.

DR. A. A. MAURER of La Crosse, recently commissioned Captain in the M. R. C., is at Camp Custer.

DR. L. H. FLANCHIER, formerly connected with Muidale Sanitarium, Wauwatosa, is enrolled in the hospital corps at Fort Ogelthorpe, Ga.

MAJ. NELSON M. BLACK, formerly a leading eye specialist of Milwaukee, is head of the subdivision of ophthalmology in the office of the surgeon general at Washington. He is Uncle Sam's chief eye specialist.

DR. H. D. LUDDEN of Mineral Point has been ordered to report for duty in the service of our country.

DR. J. R. HUGHES of Dodgeville has been ordered to report for duty at one of the training camps.

DR. MERRITT JONES is in Philadelphia taking a course in orthopedic surgery, which is correcting

deformities in cripples and the wounded. He will remain there for three months before entering into active service.

DR. T. D. SMITH, Neenah's first war victim, wounded in a German air raid in France, has landed in America and will resume his practice.

DR. U. W. WEEKS, who has been practising dentistry, is now in training at Jacksonville, Fla., in the quartermaster's department.

DR. RONALD ROGERS, who received his degree of M. D. at Columbia University, N. Y., may soon be one of Neenah's practicing physicians.

The following commissioned officers are receiving training at Ft. Riley, Kansas: Dr. M. A. McGarty, La Crosse; Dr. Wm. J. Thompson, Portage; Dr. Vincent, J. Shippy, Stevens Point; Dr. A. L. Olson of Stoughton; Dr. John W. Smith, Milwaukee; Dr. George E. Reay, La Crosse; Dr. P. R. Minahan, Fond du Lac; Drs. Allen and Cooper of Norwalk; Dr. Wm. Buckley, Hartford; Dr. H. N. O'Brien, Delavan; Dr. E. V. McComb, Menomonie; Dr. C. O. Schaefer, Racine; Dr. Vernon Roberts, Milwaukee; Dr. J. C. Kÿllo, Superior; Dr. C. F. Andrews, La Crosse; Dr. J. E. Simpson, Portage; Dr. Harold Helm, Beloit.

DR. GEORGE W. HARRISON, Ashland, has reported at the aviation camp near San Antonio for duty.

DRS. WILLIAM H. HECKER and T. F. SHINNICK of Beloit have received appointments in the medical corps of the army as captains.

DR. OETTIKER, Platteville, who has been local surgeon for the C. & N. W. Ry. for the last thirty years, recently resigned. Dr. Cunningham has been appointed as his associate who will take complete charge of the surgery and Dr. Oettiker has been asked to stay in their employ to attend to the optical work.

By specific orders from the war department at Washington notices are posted in various barracks that men who decline to receive medical attention when officers believe treatment is necessary will

face court martial. The patient must submit himself to a board of three medical officers, and if the board finds that medical treatment is imperative, the patient must submit to operation or treatment.

EX-MAYOR G. A. BADING, who entered the medical reserve corps last summer as a first lieutenant, has been promoted to captain. He is stationed at Deming, N. M., having been transferred from Ft. Riley, Kans.

DR. A. C. KOLLS of La Crosse has been serving as assistant chief of the laboratory of the bureau of mines experiment station at Washington and has been given a commission in the medical reserve.

DR. C. A. COOPER of Norwalk has been called to the army service.

Kenosha plans to have a new school course. Co-operating with the Board of Health, the Board of Education will cover a course of study in maintaining quarantine. It is hoped that by this means the spread of contagious diseases will be prevented. The children of the public and parochial schools will have this instruction.

It is reported that smallpox is prevalent throughout the state, especially in the smaller towns. The State Board of Health is asking that all children of school age be vaccinated.

There is a state law which prohibits children from attending school 25 days after coming into contact with anyone who has the disease, nor can they resume their studies without being properly vaccinated. The State Board is endeavoring to enforce this rule strictly.

In view of the seriousness of the social disease problem confronting the country at the present time, the Wisconsin Board of Health voted to petition the governor to include in his call for a special session of the Legislature, special recommendations to amend the law in order to make it more effective.

The State Board of Health has selected Oshkosh for the erection of a joint co-operative hygienic laboratory.

Milwaukee County plans to spend about \$500,000 in new buildings and additions to the County

Institutions during the present year. Increasing number of cases of tuberculosis among children has made it necessary to take immediate steps. Among the buildings contemplated is a cottage for the treatment of children with tuberculosis, a receiving ward at the hospital for mental diseases, together with a main building as an asylum for mental diseases. It is hoped that specialists will be given a free hand in constructing these buildings.

The first report of the work done by St. Saviour Hospital in Portage has been published. The hospital was opened on April 30th, 1917. It has had a very prosperous and successful year. The hospital is partially supported by subscription.

The recent report of the Emergency Hospital shows approximately 6,715 patients who were treated during 1917, an increase of 400 over 1916. The number of nursing days was 11,830, an increase of 600. There has been a greater percentage of seriously injured who have had to be kept in the hospital longer than usual.

Nicholas Hospital at Sheboygan in its annual report shows a total of 1,570 patients, 824 males, and 746 females, an increase over 1916 of 84.

The directors of Mercy Hospital of Janesville at their annual meeting recently reported 783 patients admitted to the hospital during the year. Charity work done amounted to \$1,237.88. The hospital has been increased in capacity by the alterations in the building during the past year, making the number of beds, formerly 35, now 40. The cost per patient was about \$19 per week.

The Marquette Medical School is soliciting subscriptions to its endowment fund of \$1,000,000, of which the Carnegie Foundation has given one-third. The Medical School authorities feel that the state of Wisconsin will not be lacking in gifts to establish a first-class medical school with high standards in this state.

Rice Lake, with \$20,000 subscribed, is practically assured of a new hospital in the Spring. A number of prospective donors are to be heard from.

Representatives of the Federal Census Bureau are making investigations in Wisconsin into the

birth records filed with the State Bureau of Vital Statistics. This will be used for a basis of admitting Wisconsin to the birth registration area.

Arrangements are being made whereby plans to build a new hospital next summer at Shawano are in progress. Rev. Stubenvoll will conduct an extensive campaign throughout the entire state raising the necessary funds for this purpose.

The first Wisconsin Unit for Health Aide training at the Milwaukee County Hospital finished their six months' course and were awarded diplomas by Dr. L. M. Warfield. The course under the supervision of Miss Eva Greisen, R. M., included lectures by Drs. Warfield, Henderson, Schwartz and Gatterdam of Milwaukee. The work has been a valuable training and will fit the girls to take the places of the registered nurses at the front, which is the purpose of the course. Two years' service is compulsory upon completion of the training.

The St. Joseph Hospital, Ashland, accommodated a total of 2,408 patients as against 2,260 for the year 1916.

The Maternity Hospital which has occupied the William Plankinton homestead for four years will vacate the premises following the sale of the property. No plans have yet been formulated to provide for another building.

Recently in Philadelphia there was a conference on State Health Insurance attended by delegates from states which have legislative committees to study the subject. It is reported that the sentiment was practically unanimous, for some form of state health insurance but were divided on the nature of the detail plans. Many problems having to do with health insurance were discussed.

Marquette University has received a gift of a thousand volumes from the library of John Cronyn who was an uncle of Dr. Wm. J. Cronyn of Milwaukee. Among these volumes are some very valuable old medical books.

Eau Claire is trying the experiment of giving forenoon milk lunches for the 260 school children attending building No. 2 of the 7th ward school. Every effort will be made to see that the children

get pure milk. The purpose of this is to give the children something in the early hours of the day, because it has been found that so many reached school without breakfast.

The County Defense Council's Health Committee has passed a series of resolutions which have been sent to the county's fifteen examining boards, asking them to provide better facilities which would permit of more efficient examination of the draft. So many of the local boards were examining men in noisy places that it is felt that a good many men slipped through who were later sent back from camp.

The State Council of Beloit has voted to offer an annual salary of \$2,500 for a full time public health officer.

One of the interesting phases of the work of the Marquette University Dispensary is that of the pediatric clinic where diseases of the children are treated. From 70 to 80 patients visit the dispensary daily, the number amounting to 16,000 to 18,000 yearly.

Marquette Medical School through its dispensary clinic has recently established a Prenatal department. Pregnant women are registering early in order to secure medical care and advice. Nurses visit the mothers regularly in their homes and physicians from the Dispensary attend the patients.

Licensing of all maternity hospitals, homes for infants, "baby farms," etc., is being done under a law of 1915, vesting their control in the state board of health. No fee is required. If a part of a general or special hospital is given over to the accommodation of maternity cases, a license is required, according to the attorney general.

At the annual meeting of the medical staff of the Emergency Hospital, Milwaukee, it was advocated the county hospital be moved to the city and merged with the Emergency Hospital, because many patients are not in a condition in which it is advisable to move them. At the staff meeting, Dr. Daniel Hopkinson was elected president; Dr. C. M. Echols, vice-president and Dr. O. Lotz was re-elected secretary. A welfare committee was formed consisting of Dr. H. J. Heeb, president of the

board; Dr. Hopkinson, president of the staff; Dr. Echols. Miss Regina White, superintendent, and Dr. John W. Smith, senior resident physician.

St. Joseph's Hospital, Eau Claire, has added a new laboratory of which Sister Tirmina of St. John's Hospital, Springfield, is to have charge. She will have charge of the X-ray, bacteriology and pathology work.

St. Francis Hospital of La Crosse reports a very successful year. The number of patients admitted during the year of 1917 was 2,764.

Milwaukee has been suggested as a suitable site for one of the sixteen army hospitals to be built in this country. The Rotary Club have signified their willingness to raise a fund of \$100,000 to help the government equip such an hospital, and offered part of the grounds at the National Soldiers' home.

The County Judiciary Board have decided to build a hospital for isolation purposes to prevent the spread of contagious diseases. It is expected that the building will cost about \$100,000 including furnishings.

DR. A. G. GIGGER of Providence, R. I., has been recommended as health officer for the city of Wausau. He takes up his new position on February 15th.

Milwaukee enjoys the fifth lowest death rate of any city in the union of over 100,000 inhabitants, according to the figures of the statistical department of the federal census bureau, which shows the death rate in Milwaukee for the week beginning Jan. 12 to have been 11.4 per thousand inhabitants. The cities showing a lower death rate than Milwaukee were: Spokane, 6.9 per thousand; Seattle, 9.2; Minneapolis, 9.3; and Portland, Ore, 9.6.

DR. W. F. WHYTE, Madison, was re-elected president of the state board of health for the sixteenth consecutive time.

The annual distribution of 120,000 ampules of silver nitrate solution, preventive for infantile blindness, is being made by the state board of health to all physicians and midwives. Throughout Wisconsin only fourteen cases of ophthalmia neonatorum were reported in 1917.

DR. R. C. NUTT is now located at Two Rivers where he is again following his profession. He has taken over the practice of Dr. Farrell of that city who is in the Service.

DR. DAVID V. MEIKLEJOHN has been appointed oculist, aurist, rhinologist and laryngologist for the Soo Line at Fond du Lac.

REMOVALS

Dr. B. B. Hamilton, Ridgeway to Dodgeville.

Dr. G. F. Andrew, DeSota to La Crosse.

Dr. J. J. Ellsworth, Dodgeville to Appleton.

Dr. Lewis Frick, Athens to Two Rivers.

Dr. C. M. Gleason, Oconomowoc to Manitowoc.

Dr. Robert Hickey, Winchester to Proctor, Minn.

Dr. J. W. Ehmer, Neosho to Lomira.

Dr. H. J. Higgs, Crivitz to Detroit, Mich.

Dr. E. M. Rice, 331 Grand Ave. to 331 Grove St., Milwaukee.

Dr. Marshall Surensen, Prairie du Chien to Viroqua.

Dr. C. H. Cremer, Tomah to Cashton.

Dr. R. C. Meyer, Elkhart Lake to New Holstein.

Dr. G. V. I. Brown, 445 Milwaukee St. to 404 Colby-Abbott Bldg., Milwaukee.

Dr. W. E. Grove, 806 Downer Ave. to 502 Wells Bldg., Milwaukee.

Dr. R. J. Wenker, Palace Theatre Bldg. to 418 Camp Bldg., Milwaukee.

Dr. B. O. Bendixen, Kewaskum to 10 Graduate House, Univ. of Pa., 3700 Spencer St., Philadelphia.

Dr. Royer has gone South for his health and expects to remain six weeks. Dr. J. G. Gruwell of Bonduel will attend to his practice while he is away.

MARRIAGES

Dr. Gerald A. Sullivan, Milwaukee to Edna Goodnetter, Milwaukee.

Dr. Russell R. Heim, Marinette to Elizabeth Anderson, Grantsburg.

Dr. P. V. R. Hommel, Neillsville to Maude Twining.

DEATHS

Dr. J. M. Evans, Evansville, consulting surgeon for the Northwestern Railroad on the Madison Division, died on January 7th at St. Mary's Hospital, aged 59 years. He was born in Evansville, the son of Dr. J. M. Evans, pioneer physician, for whom the city is named. He received his medical education at Rush College in Chicago, finishing in Vienna and Berlin. He had practiced his profession for more than 25 years.

Dr. J. H. Peaslee of Marinette died January 7th.

Dr. George Wilbur Crawhall died recently in Seattle. He was graduated from Rush Medical College, Chicago, in 1890, and from the University of Pennsylvania in 1896. He took a post-graduate course in Bellevue Hospital, New York City, and in 1900 took a course in the University of Berlin, Germany.

Dr. Robert A. Cunliffe died January 8th at the home of his parents, Mr. and Mrs. W. C. Cunliffe, 138 Juneau Avenue, Milwaukee.

Dr. Martin Oyen died January 2nd at his home in Ellsworth. He was a graduate from the University of Minnesota in 1903.

Dr. E. G. Christman, pioneer physician of Sauk County, died on January 16th, aged 79 years. He was born in Herkimer County, New York, in 1839 and served throughout the Civil War as field surgeon. Dr. Christman came west in 1867, locating at Loganville where he practiced for 21 years. From there he moved to Spring Green. For the past 20 years he had served as surgeon for the C. M. & St. P. Ry.

Dr. C. A. Scanlon passed away at his home on January 12th, 1918. He was born in the town of Union, Waupaca County, in 1883. He graduated from the Marquette University, Milwaukee, in the

course in dentistry and began his practice at Superior, from where he moved to Iron River. From there he moved to Manawa and built up an extensive practice. Due to his failing health he was obliged to give up his practice and moved to Glendive, Montana, but was obliged to return to his home in Manawa where the end came.

BOOK REVIEWS

PHYSICAL DIAGNOSIS. By W. D. Rose, M. D., lecturer on Physical Diagnosis and associate professor of medicine in the Medical Department of the University of Arkansas. Two hundred ninety-four illustrations. C. V. Mosby Company, 1917. St. Louis. Price, \$4.00.

The author has written a book on Physical Diagnosis which covers very well the essential points in the examination of the body. In a book of this size there is necessarily much which is omitted. There are included short chapters on the head, neck, and limbs and a very brief outline of the examination of the nervous system. A table showing the diagnostic features of the Barany tests is a valuable addition.

The author has culled the recent books on his subject and has used the illustrations from them lavishly throughout his text. Due credit is always given. Evidently a number of illustrations are original.

We think that the X-ray on page 97 would have reproduced better had it been printed on heavier paper, such as carries the two colored figures opposite page 104.

On the whole this volume is a safe guide for the student of medicine and should be valuable in supplementing his course on physical diagnosis.

A HANDBOOK ON ANTISEPTICS. By Henry Drysdale Dakin, D. Sc., F. I. C., F. R. S., Emeritus Professor of Pathology, University and Bellevue Hospital Medical College. Major, Medical Officers' Reserve Corps, U. S. Army. The Macmillan Company, New York. 1917. Price, \$1.25.

This small book is as it says, a list of the chief chemical antiseptics useful for surgical dressings. It is a compilation from the literature on the subject and saves consulting the many valuable scattered reports on antiseptics. It will have to go to France with us.

TECHNIC OF THE IRRIGATION TREATMENT OF WOUNDS BY THE CARREL METHOD. By J. Dumas and Anne Carrel, authorized translation by Adrian V. S. Lambert, M. D., acting professor of Surgery in the College of Physicians and Surgeons (Columbia University), New York, with an introduction by W. W. Keen, M. D., L. L. D., F. R. C. S. (Hon.). Paul B. Hoeber, New York. Price, \$1.25.

This Technic of the Carrel Method is a pocket-book full of valuables brought up to date by one who knows. It is sufficient to insure the correct methods of administering this form of treatment with many illustrations to check up the individual interpretation of the text.

The Wisconsin Medical Journal

Volume XVI

MILWAUKEE, MARCH, 1918

Number 10

ORIGINAL ARTICLES

THE MENTAL HYGIENE MOVEMENT AND PSYCHIATRY.

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MILWAUKEE.

There may be but little appetite for any large problem alongside that of the war, which has made all others shrink, but it would be a pity if a movement like that of Mental Hygiene should find its propaganda crippled. If one should come before you with a rational, workable plan for making the world a better place to live in, it would sound Utopian, but that is just what this movement contemplates and, in such an unsensational, scientific, fact-gathering way, as to compel us to take much stock in it. As it concerns a department of public health that has had but too scant a hearing in our state and lies in the field of mental disorders and defects in which the public look to the doctors as authorities, and which now acquires added importance on account of the war, I naturally feel that it should be widely ventilated here.

Now, what is the Mental Hygiene movement? It is a movement to improve the understanding and management of the insane and defectives without and within institutions; to prevent insanity and mental defects, which express themselves so largely in crime, pauperism, dependency, etc., and to conserve mental efficiency. That surely is a very high-sounding program, and while many of us have long been devoted to this cause, hap-hazard, it was for the first time crystallized about ten years ago, in the work of the "National Committee for Mental Hygiene" with unit societies now in sixteen of the United States—a sort of national clearing house, where this program is integrated and stimulated under the support of leading psychiatrists, psychologists, educators and the financial aid of philanthropic men. A suite of administrative

offices is maintained in New York City for its business ends, publications, records, bureau of information, surveys, exhibits, inspections, etc.

Strangely enough all this has come about through a layman, Clifford W. Beers, who suffered a manic-depressive psychosis for several years, during which he endured the usual misunderstanding and mistreatment, which he set forth in autobiography—"A Mind That Found Itself,"¹ This suffering was fortunately not wasted, but found transfer under a happy mental mechanism into a zealous devotion to the cause: not, as in similar instances of ex-patients, finding expression in sensational outcry or "freak" legislation, but in modest, intelligent and constructive marshalling of forces scientific and popular that were already available.

Let us look at the field of its operation:

The certified insane, alone, are as one to about 300 of the population,² and when we include those uncertified and the feeble-minded and delinquent, the psycho-neurotic, inebriate, etc., the problem is easily ten times as large. A recent survey of Nassau County, Long Island, under the auspices of the National Committee presently to be published shows one in about thirty, i. e., three per cent of the population, as thus affected, and Dr. Rosanoff, who directed the survey, tells me the figures are modest.³ The war threatens to quadruple this number. This material, prodigally reproducing itself, is essentially the *clientele* of the mental hygiene movement, which, with its social connotations, it seeks to relieve and arrest. When you think that out of every dozen of us one may now or at some time be psychically maladjusted to survive socially and belong to the clientele: when you think of the great state of New York appropriating one-third of its total year's expenditure in this direction, not counting the effort and outlay of

¹Published by Longmans, Green & Co., 4th Ave. and 30th St., New York City.

²In Wisconsin 1 in 308 at the present writing.

³Now published in their quarterly journal—"Mental Hygiene," July, 1917.

private agencies in which this problem is the underlying one; when you realize that much of it is preventable, not only remotely but directly, it brings home to you the enormity of the situation and the need of vigorously engaging a problem fraught with so much suffering, so much waste of mental efficiency and so much financial burden.

AS TO THE INSANE.

Their care easily falls into the *custodial* care for the many chronics and the *hospital* care for the acute cases. This is exemplified in our state by the thirty-five asylums for the chronic and the three hospitals for the acute and recent cases. This hospital idea, slowly evolving from the early neglect and superstitious attitude to the insane and the later more kindly custodial care, sought to bring psychiatry into the field of general medicine, from which, under a painful incompatibility, it was too long divorced. It is a sad thing, that the insane had never had extended to them the same consideration that is so ungrudgingly given to those suffering from sickness in general. The hospital idea culminated in the modern psychopathic hospital, established either in connection with existing institutions for the insane or as units of general hospitals, which patients may voluntarily enter for treatment of mental disorders, as they enter medical or surgical hospitals in general. Models of this class are the Boston Psychopathic Hospital and the Phipps Psychiatric Clinic at Johns Hopkins, Baltimore, which by the way, owes its existence to the Mental Hygiene movement.

In these and similar institutions, like that of the Psychiatric Institute of New York, the intensive study and treatment of mental disorders has received its largest fulfillment. So thorough is this study, in selected cases that one case history may approach the dimensions of a small volume and the work done and disseminated by publication is the pride of psychiatry.

The individual attention incident to this intensive study was found to have pronounced therapeutic value—indeed it is a truism that benefit is in direct relation to the amount and quality of attention. Mental symptoms are but pathetic attempts at adjustments to reality, for which the sufferer naturally craves understanding, and benefits by sympathetic and especially expert attention to his troubles whether they be normal or patho-

logical. Formerly there was no attempts at understanding. The mere fact of establishing "insanity" was the end. Whereupon by popular tradition the patients were reduced as it were in the biological scale, as if they had quite ceased to belong to the genus homo and become some bizarre unrelated freak of nature to whom the common considerations did not quite extend, whom we could neglect or patronize, or discipline or restrain and were relieved of the need of understanding further than that they were "insane." Now the word insanity is largely tabooed in psychiatry as a legal and not a medical term, it being for the law with antiquated definition of insanity (originally from a medical source) to say whether a given mental disorder comes within the legal definition of insanity for which the state can limit man's freedom or excuse him from crime, etc. This is the kind of "diagnosis of insanity" made in our commitment courts; which a policeman can often do quite as well as a psychiatrist.

Then came a period when classification was the fetish. Such questions as "Is he a mixed manic-depressive or dementia-praecox?" absorbed attention. Nature has no contract to fit cases into definite groups, at least we have not yet reached finalities in whatever group is the order of the day, and to "label" a patient as a "precox" or a "manic" is not the end of psychiatry. Dr. Hoch, in such a situation, at a clinic, when asked "What is he?" answered, "He is a man." Happily we are coming to deal rather in qualities than entities, studying the character of the reactions, the phylogenic interpretations at the various levels of the personality, the psycho-analysis and mechanisms revealed in the behavior, rather than drawing forth the nosology. There has been some criticism of extremes in this direction from high sources, but in the main it has been regrettable.⁴ If in some institutions they cease to speak in terms of fixed diagnosis and interpret the patient's conduct as "hallucinating a homo-sexual attack," or as "anal eroticism," or as an "attempt to pass from homo to hetero-sexual levels," they are all laudable efforts to interpret intelligently something very real and fundamental in the phylogeny. Time and not destructive criticism may be trusted to make the final evaluations.

A great feature of psychopathic hospitals is their out-patient department. Here thousands of cases

⁴President's Address. Dr. Wagner. American Medico-Psychological Association, 1917.

are treated yearly and without institutional care, in the early and most promising stages. At the Boston Psychopathic Hospital 1,500 cases were so treated in the out-patient department last year, some of them sent in by physicians, courts, and schools, and a large number of them coming of their own initiative. Fostered by the Mental Hygiene movement many Eastern Insane hospitals, duly recognizing their responsibility for the mental health of the communities which they serve, have established these out-patient clinics in towns, adjacent to the hospitals, which the hospital staff directs (sometimes in the evening to encourage attendance of patients unable to come by day). New York City alone has perhaps a dozen clinics covering various mental fields, with, in many places, a psychologist for mental testing and a social worker to co-operate with the field, the therapy sometimes lying wholly in the field of the social worker.

THE CHRONIC.

Sometimes it seems that in the zeal for understanding the acute cases and the building of psychopathic hospitals and clinics, we are in danger of neglecting the chronics, who, under the better custodial care of modern days, survive so largely. Here the occupational specialist finds a rich field for more or less productive occupation, having a wonderful therapeutic value to the patient and bearing on the economic feature. It is strange that it has taken so long to meet the problem of occupation adequately, when we have had before us the thousands of idle hands that ached to find outlets for repressions, in creative impulses. Much of this unutilized energy is now being impressed into war service (agriculture, sewing, knitting, shoe-making, etc.). The National Committee is just now inaugurating important war work in the field of occupation and re-education in the neuro-psychiatric cases which constitute about one-tenth of the war casualties. Some institutions are doing kindergarten work with the chronic, terminal dementias along the Froebel and Montessori methods, with results abundantly worth while.⁵

One of the best works of the National Committee of Mental Hygiene is the so-called *after-care* of discharged patients. Many institutions have as many patients discharged (uncured) outside their

walls as within, and co-operative links between them and the institution are now maintained on a very large scale. After-care gives isolated patients the necessary social contact and meets family difficulties that make for relapse; better adjusts the patient to his living problems in the outer world; relieves unnecessary crowding of the hospital; makes experimental discharges more feasible; facilitates the early recognition of relapses; and has so large an educational and prophylactic value to the community as to make it one of the happiest movements fostered by the Mental Hygiene organization. It brings to the insane problem what parole, indeterminate sentence and probation, has so auspiciously brought to the criminal problem. In Massachusetts and New York after-care is now thoroughly looked after, and in many other states in a lesser degree.⁶

On account of the crowded condition of the institutions of our states many persons with mental disorders are still kept in jails and poor houses, especially in the southern states. Dorothy Dix started removing the insane from these places in 1841, but her work is still unfinished. Sometimes these patients are temporarily held, awaiting vacancies in the state hospitals, in other cases they remain permanently, having become "chronic," and preference being given to the admission of recent and acute cases. This is a situation that cries to heaven. I recently visited some of the jails in Mississippi. In Vicksburg I made several visits to the county jail. The jailor told me he has often as many as eight to twelve insane (white and black) awaiting transfer to the crowded state hospital at Jackson. This waiting is sometimes stretched over a year or more. I saw these patients shut in, in the same iron cages with criminals. A low brick building constructed at the side of the handsome jail contains overflow cells to accommodate this class. By a tragic contrast the outside wall of this building, standing on a well kept lawn facing the trim sidewalk, bears a handsome ornament—asthetic and dedicated to the humanities;

⁵In Wisconsin we have scarcely a beginning of this useful work. A fruitless attempt was made by the writer to call the governor's attention to it, in connection with his campaign for retrenchment of state expenditures. It is surely a thing that it would "pay" the county administration boards to look into. By means of this and allied measures large sums could be saved to the state, some of which could be applied to research into causes of mental disorders.

⁶At Cherokee State Hospital, Cherokee, Iowa.

the inside of this wall, however, seems to be dedicated to the inhumanities, for it looks down into a filthy cell containing a shrivelled woman, without a shred of clothing on her body, and an iron bed, devoid of bed-clothes and disclosing the bare, flat, iron bands that serve as a mattress. She came toward me as I stood in the cell door, moaning and shivering as the light April rain fell upon her naked body. She had no nurse, no care but what the well-meaning jailor, who would hardly be expected to include in his functions the nursing of the sick, could give her. These are not isolated cases, but the conditions are widely prevalent.

At the jail in the beautiful city of Natchez they declared that they housed only negro insane, giving the preference of transfer to the hospital to the whites, and they made inspection quite impossible on two visits by a reluctance that amounted to prohibition.

At the same time leading citizens of the state would say, "Why don't you people of the North come to live down here 'in God's country'?" To such a query one could well reply, "One reason might be that if our families, by a chance much greater than that of having typhoid fever, should become insane or unmanageable from mental disorder, they might have to be shut up in a narrow cell of your jails with criminals and without care and nursing—entirely neglected—for an indefinite time. In selecting a place to live such a matter is worth quite as much forethought as the climate, schools or taxes." Later, when I was visiting the state hospital at Jackson they explained a somewhat large mortality by the hurried transfer of these jail patients when they become moribund. One of them had just died after admission.⁷

A WORD AS TO DEMENTIA-PRAECOX.

It is said that an army of 15,000 young people under the name of dementia-praecox enter our asylums every year, to leave hope of exit behind, and we are accused of sitting supinely under this appalling fact. Many lances are attacking this baffling problem, even those of the surgeon, who

is usually credited with scant psychiatric sympathies.

This disease of adolescents appears with a loss of interest in matters that should be of concern to the patient, a gradual deteriorating process together with myriad symptoms which are the result of compromise in attempted adjustment to an ever vanishing reality. Studied at the various levels from the bio-chemic to the cultural, the tendency of students is to take a more common co-operative and less mutually exclusive ground. Kraepelin emphasized the too purely symptomatic side, and his division into hebephrenia, paranoia and catatonia is losing definition. Catatonic states, for instance, we had long known to appear independently of dementia-praecox and have more recently seen in other psychosis (laboratory paresis). Then came the psychogenic views. These were the *shut-in* types of personality of Hoch, viz., that dementia praecox occurs in those who in childhood are seclusive, unsocial, inaccessible, or shut-in types of personality. The contributions of Meyer, the philosopher of the psychiatric schools, and Jung, Campbell, etc., were along the same psychogenic lines. Later came Bleuler's theory of *ambivalency*, by which ideas are too equally balanced and motives and action which should normally proceed from conflicts between two opposing forces, find one quite as valid as the other, and become blocked, furnishing much of the symptomatology, or under the inability of being invaded by the world of reality find expression in the *opposite* idea or action (negativism) with which, indeed, it is more primitively associated than with *any other* idea—i. e., the opposite thought or act is easier than any other. This psychogenic approach furnished useable therapeutic material and illuminated causative factors bearing on education and training of children. On the organic side are Southard's contributions, showing structural changes in the brain either causative or by-products. The endocrinologists engage along the apparent disorders at the physio-sexual level, the Abderhalden tests, showing a significant activity in dementia praecox.⁸ As I said, even the surgeons became interested—the optimistic Bayard Holmes, who had been bringing a stim-

⁷I would suggest the reading of Dr. Salmon's classic—a report of a survey of Grayson Co., Ala., made under the auspices of the National Committee and published in their quarterly journal, "Mental Hygiene," April, 1917.

⁸The as yet unfinished research of Dr. Julius Retinger the bio-chemist of the Chicago Psychopathic Hospital tends to show that the earliest disorders lie in the digestive glands, next in chronological order, the colon then the motor areas and last the sexual glands.

ulation, fresh-minded on the problems from without, on the proof of coecal stasis and the existence of histamine in the colon, has attached the appendix to the outer abdominal wall and applies daily flushings with what he calls "alarmingly" favorable results." I might add that a special journal has just made its appearance in Chicago, under the auspices of the Society of the Study of Dementia Praecox.

THE DOMAIN OF THE FEEBLE-MINDED.

The National Committee of Mental Hygiene, at first launched along the problems of insanity, builded better than it knew, for soon the larger problems of the feeble-minded and its correlations became automatically an engrossing field. Here again we are apt to think in terms of frank "idiocy" and neglect to note the more wide-spread and less obvious feeble-minded, who are so largely factors in social problems, crime, pauperism, incorrigibility, prostitution, dependency, and many other social mal-adjustments, and who eventually turn up as public charges in one way or another—in reformatories, prisons, alms houses, maternity hospitals with illegitimate and tainted offspring, and who depreciate the moral currency and pensionize more than necessary their normal fellow beings.

I might say in passing that, while the largest single factor in delinquency is feeble-mindedness, that is not by any means saying that the feeble-minded as a class are vicious. This is a prevalent and mistaken conception, which has done much injustice to defectives, who are often so guileless and gentle that they used to be regarded with special veneration. In unfavorable environment however they are dangerously weak and suggestible. It is naturally but a small step from the asocial condition, which is necessarily their lot, to the anti-social one.

I show here the picture of two girls, inmates of the Wisconsin Home for Feeble-Minded at Chipewewa Falls, who belong to the typical moral imbecile class who have the mentality to marry and in fact do marry early and often or bear illegitimate children. Here are two more of the same class. In all of them sexual problem led to their commitment. In fact in the last ten years only

18 of this type of girls between the ages of 3 years and fifteen have been committed while in the same period over 200 of the same type between 15 and 30 years have been committed after the sexual and progeny problem had been rampant for years before their segregation.

The feeble-minded are exceedingly numerous (*circa* one-half million in the U. S.) fecund and highly liable to reproduce their kind. According to the Mendelian law of heredity where both parents are feeble-minded *all* the offspring will be feeble-minded. If one parent is feeble-minded and one normal, *some* of the offspring will be feeble-minded, and those of such unions as are normal *may* transmit feeble-mindedness to their progeny. In this connection I quote from Dr. Fernald's slides:

"Here is an imbecile whose mother is an immoral imbecile and whose father is a drunken imbecile. They have five feeble-minded children.

"Here is another boy, who is also the son of a drunken father and an honest, hard-working mother. They have three children, all feeble-minded. Here are two who escaped scrutiny of immigration officials, with three others feeble-minded in the same family.

"Here is a group of girls mentally seven or eight, although having the bodies of young women, attractive, suggestible and taking but little persuasion to seduce, owing not to a bad tendency but to a weak resistance.

"This boy had a father and mother feeble-minded and there are six feeble-minded children in the family. Here is a boy who had a feeble-minded father. The father first married a normal woman when he was nineteen. The boy looks like his father. The first wife died and the father married again, and there were two feeble-minded children. The second wife deserted him and he married the third time, and there was one feeble-minded child of the third marriage.

"Here is a girl, mother of a family of eight, all either feeble-minded or insane. This girl became a mother at twelve. She is one of a family of twelve. One brother is in prison and one in a reformatory; one sister a prostitute, two sisters in a reformatory; mother a defective and father a ne'er-do-well." And so the story goes.

Two opposing views prevail as to feeble-mindedness; one of Ray Lancaster that it is hereditary, based on atavistic reversion to animal ancestry;

⁹"Researches in Dementia Praecox," Bayard Holmes, M. D., read at the sixth annual meeting Alienists and Neurologists of America, July, 1917.

the other, the structural theory, to which Dr. Wilmarth of our state made an important contribution by showing structural brain changes in about 80 per cent of autopsies.

The feeble-minded may be described as arrested in mental development from birth or very early age and as retaining the minds of children no matter what their actual age may be. A person who is twenty and has a mind of eight or ten is feeble-minded. Roughly they are classed as *idiots* when the mental development is not above that of a normal child of two or three years; *imbeciles* when the mental age does not advance to more than that of a child of seven or eight; and *morons* when the mental age does not exceed that of a child of twelve, no matter what the chronological age may be.

The mental age is determined by measuring the intelligence by mental tests, and the application of these tests mark the large entry of the psychologist into the field of psychiatry. I cannot go into the details of the many tests. The Binet-Simon test and its modifications is the most commonly used. These tests contain a group of questions that a normal child could answer (or perform) at different ages from three to thirteen. If a person cannot do those, say, of the seven-year group and can do those of the six, he has a *mental age* of six, no matter what his real age, and is classed as imbecile. The Yerkes-Bridges and the Terman tests are also largely used. All these tests require some understanding of the language. Others are *performance* tests (which test the *native* mental equipment, which count so much more than the scholastic in social efficiency)—things to do on a "form board" or a puzzle box, others, learning tests, construction tests, etc.—pictorial completion tests like that of Dr. Healy, in which portions of a picture are missing, to complete which, out of many possible "inserts" into these blank places of the picture, the subject attempts to select the right one to make the picture complete—logical. All of them test the sensorial and ideational levels—attention, memory, reason, imagination, judgment, retention, concentration, reaction time, etc., failing, of course, to include the affective levels—the moods, suspicion, ideas of reference, dreamy states, emotion and reactions common in those psychotic disorders which affect intellect but little and in which lies the social handicap of many who may do well in

the tests. It is therefore that they are most applicable to quantitative intelligence defects.

These tests are often popularly criticised as unreliable—that different results are obtainable at different times and by different observers—that the patient's attitude interferes with results, his embarrassment, suspicion, temporary conditions that might be classed under what Hoch has called failure of "mental tension," etc. But it is not claimed that they are finalities and defects in their application are controlled in the hands of experience.¹⁰ It should also be added that they fail to register a certain class of persons who remain on infantile levels of behavior, though they get along under a protecting and favorable environment.

These tests have not only found useful service in the domain of the feeble-minded in examination of school children and juvenile court work, in the modification of educational methods, in general surveys of communities, in vocational fitness and efficiency, recently in war service (gunners and aviators), but they find large adaptation in adult psychiatric cases, to determine relative deterioration in parietic, praecox and other dementing disorders. So that the psychologist is now properly a part of the personnel of psychopathic hospitals and clinics.

A word in connection with some current friction between the psychologists and psychiatrists. Custody of the indigent feeble-minded, as it passed from hap-hazard care in alms houses and jails, fell rather early into non-medical pedagogic care, before the medical connotations were apparent. There are still the two schools, exemplified by the Vineland, N. J., School, under the psychologist, Dr. Goddard, representing the non-medical, and the Massachusetts School, under Dr. Fernald, representing the medical psychiatric. Naturally there lies much for the pedagogic-psychologist in the field, under the theory of arrested development and quantitative mental deficiency of the feeble-minded, but the medical psychiatric bearing is also very large and fundamental:¹¹ to-wit, the structural defects, the purely internal-medicine relations of the case, the endocrinology—the diagnosis from allied

¹⁰"Attitude as it Affects Performance of Tests." Psychological Review, July, 1916.—Augusta Bronner.

¹¹In 100 Consecutive cases at Dr. Fernald's clinic for feeble-minded there were 6 epileptic children, 8 psychoses, 7 paralysis, 12 syphilitic, 17 defective vision, and 9 objective physical disease.

conditions (juvenile paresis, cerebral palsies, dementia precox, etc. While a wise co-operation is happily the rule, there has been some tendency to criticise the "clinical psychologist" for a too obtrusive occupation of the field, which has found expression in a recent resolution passed by a committee of the New York Psychiatric Society.¹² Criticism, however, is more directed to the abuse of the situation by irresponsible testing by nurses, social workers, etc., and to a certain class of "practicing psychologists," who set up offices and work without medical or psychiatric knowledge or aid, and assimilate the problem largely to themselves. We have need of each other, however, and so far as my observation goes the better men and women in the field co-operate very well. The psychologist is indispensable, his work cannot be easily done by the psychiatrist, and he has come to stay, in my opinion.

PROPHYLACTIC.

Too little, however, has been done by the medical men. Take, for example, the relation of feeble-mindedness to birth injuries in protracted labor.¹³ There is reason to think that possibly one-fourth or more of the cases may be laid to the obstetric door and largely preventible—the hemorrhages, porencephaly, the spastic cases with their epilepsies. The obstetrician should not congratulate himself on the outcome of protracted labor where the child's life was imperiled until time has revealed that he has not damaged something more important than its life.

Autopsies have been too infrequent in feeble-minded institutions—one belonging to the non-medical kind boasting that it has no "ghost house"—no autopsy equipment.

Alcohol and syphilis are, as in insanity, large factors always amenable to attack. Alcohol is probably becoming a diminishing factor;¹⁴ syphilis not so large as in insanity, some recent alarming Wassermann tests to the contrary, notwithstanding.¹⁵

Perhaps the first and most important step which the Mental Hygiene Societies are taking is the making of surveys to get the facts and publish them

widely. Emphasis is naturally placed on school children testing and at the earliest age so that segregation may be brought about before habits are formed that lead to the sexual and antisocial problems. The Connecticut society, the first state unit to be established, in the survey of a thousand school children found forty defective. The difficulties of segregating the higher grade morons, who are more dangerous, is a thorn in the side of the zealous social worker and until the doctors are more co-operative and the public more eugenically minded they must content themselves with registration and extra-institutional supervision of these (which must not be too obtrusive or oppressive) remembering that the problem of segregation will be easier when institutions take on the character of colonies, where some kind of life approaching that outside is possible, where productive occupational therapy finds and fits the individual to some kind of use in the world and eases the state's burden.¹⁶ Sterilization, which has more *raison d'être* in the feeble-minded than in any other group, is the only alternative to segregation, but meets only the problem of the progeny—leaves the fate of the individual quite untouched and must await the further eugenic development of research and public opinion. In the Wisconsin Home for Feeble-Minded 24 males and 35 females were sterilized in 1915 and 1916 in accordance with the statutes.

THE DELINQUENT FIELD.

One wonders if there is any public problem which has been more contemptibly handled than that of criminology—not only the worst kind of failure to cure the criminal (as witness 80 per cent of recidivism) but great cruelty has been meted

¹²In our state syphilis was found in thirteen and three-tenths per cent in state hospitals in rural districts, twenty-three per cent in the metropolitan districts, thirteen per cent in the feeble-minded, eleven and six-tenths per cent in prisons (which is not much above the minimum estimate of syphilis at large). Dr. W. F. Lorenz, Thirteenth Biennial Report State Board of Control, Wisconsin. We can congratulate ourselves that we are doing some very promising prophylactic work by the free Wassermann tests extended by statute to the public.

¹³Some states have recently permitted psychologists to commit the feeble-minded. Remonstrance to such a plan recently made in Arizona on the ground that only physicians or psychiatrists should commit, brought the reply that the physicians did not understand the problem and there were no psychiatrists in Arizona.

¹⁴Journ. Abnormal Psychology, June, 1917.

¹⁵Symposium A. M. A. meeting, 1917. "Influence of the Labor on Brain Development of Child," Arthur Stein, M. D.

¹⁶The Decline of Alcohol as a Cause of Insanity," H. M. Pollock, Ph. D. Psychiatric Bulletin, April, 1917.

out to them, all the way up from the policeman through the court and the prison. It happens that ignorance of the nature of the criminal, joining with the common hatred of wrong doing, finds a kind of rational sanction to express itself in malevolence against them, which disguises itself unconsciously under the euphemism of righteous indignation.

The largest single factor in delinquency is feeble-mindedness and penal problems are almost entirely psychiatric. Has society a right stupidly and cruelly to punish those so many of whom are already severely punished by nature—to shut them up in solitary confinement and silence, to a jejune existence in which all social expression is stifled and every anti-social one stimulated, and in which the moral sense, which grows by social contact, is atrophied? The deliberate cruelty involved in our penal system as it is at present is usually more repugnant than the unintended crime which it is supposed to expiate.

This has been the theme of zealous reformers from Howard and Tolstoi down to Galesworthy, Lowry (himself a convict) and Osborn, etc., who could not sit easily under this dehumanizing process. Psychological medicine has long taken the criminal into its field, but mostly in an academic way, based on the study of statistics of crime or committed to some *a priori* theory of criminal responsibility, which is wholly a legal problem, or moral responsibility, which is an insoluble one. For the first time we have started out on a fact-gathering, individual study line,¹⁷ as exemplified by the rich contributions of Dr. Healy. If we are to punish, we have begun to study the material we are punishing.

The Mental Hygiene Movement has done much to stimulate this kind of study. Psychiatric laboratories are being established in many penal institutions and by contagion are deeply interesting prison physicians. New York City has by private philanthropy started such in the central police headquarters, under Dr. Hamilton and four psychiatrists, and a psychologist and two social workers. All arrests for felonies in the Manhattan district are immediately examined (an auto available to that end) and all misdemeanants arrested in the lower east side of the city. Out of the first two hundred calling for psychological study here by

Miss Keller, psychologist, provisional diagnosis in this as yet unfinished study shows—

- 4 imbeciles.
- 22 subnormal.
- 28 constitutional inferiority.
- 11 psychopathic conditions.
- 15 heroin and other drug addicts.
- 9 alcohol.
- 2 sex perversions.
- 4 dementia precox.
- 8 paranoic conditions.
- 9 insanity (legal).
- 34 normal.
- 17 miscellaneous.
- 37 not classified.

A large menace lies in the drug addicts. They are arrested now under the Harrison law for possessing drugs, mostly young men tempted by curiosity to experiment, and finally falling into anti-social acts to get enough money to supply the drug, which costs ten to twelve dollars a week when the habit is well established, even under the "economy" of using it hypodermically, after first starting in the more extravagant way of snuffing it. While a few of these apply to the psychopathic ward of Bellevue or elsewhere for treatment, many resort to theft or obtaining money in other illegal ways to secure the drug and to hold their places in business or society for the time being. They are particularly prone to relapse. The social workers at Bellevue "followed up" many of the cases treated there lately and found out of forty about thirty-six had relapsed.

The small number of sex perversions in the table is striking and perhaps would be larger if more time were available in examinations of this kind, which have to wait upon the courts and are unfortunately hurried. Judges are apt to be very severe on the sexual offender. Sexual *perversion* is often the result of curiosity and mischief during "flegel jahre" of the adolescent, but they are given solemn names and solemn sentences by the law. Sexual *inversions* are homo-sexual and have a biological basis, arising from fixation of the *libido* at infantile homo-sexual levels, or reversion back to such levels when the normal and mature hetero-sexuality cannot be maintained. They are little understood by physicians and often not at all by jurists.¹⁸

¹⁷While Lombroso had studied the individual it was an advocate of an *a priori* theory of a "criminal type."

¹⁸Jung and Adler have, I am aware questioned the validity of infantile sexual fixation and regression.

A very prophylactic institution working in connection with municipal criminal courts is that under the direction of Dr. Anderson in Boston. There they have made studies to show a large amount of feeble-mindedness in offenders sentenced or put on probation over and over again in vain, who could have been saved an anti-social career if recognized early enough, and who give almost as much work and trouble and cost to the machinery of justice as all other arrests put together.

The work of Bernard Glueck at Sing Sing is most prophetic of a better day. That old historic Bastille saturated with suffering is to be rebuilt and turned into a receiving station to become a sort of clearing house where all criminals are received on conviction to be held as long as necessary to examine and classify them and to determine their physical and mental condition and to decide what treatment or occupation will be most efficacious. Thus, coming from the outer world the convicted man will be classified into (1) the normal, capable of learning a trade, (2) the normal, specially suited for agriculture, (3) the insane, (4) the feeble-minded, (5) the psychopathic (border line insanity), and these will on admission be subjected to (1) the administrative department, (2) the medical, (3) the psychiatric clinic, (4) vocational, (5) educational, (6) religious guidance; thereupon to be sent as determined to (1) the industrial prison at Clinton or at Auburn, (2) the farm prison at Great Meadom, N. Y., (3) the criminal insane hospital at Dannemora, (4) to the institution for defective delinquents to be built. Finally, from these institutions some will pass through the indeterminate sentence or parole agencies back again to the outer world, others, who now constitute residivists, being permanently held, and thus society being effectually protected.

One trembles for fear this program is too good to be true. The old quip "to make the punishment fit the crime" is to be paraphrased by making the treatment fit the man.

Dr. Glueck's significant contribution was to show in a survey of 50 consecutive admissions to the prison, that 28 or 56 per cent suffered from conditions that are capable of affecting conduct very seriously, to-wit:

Syphilis of nervous system..... 2 or 4%
Mental defect plus syphilis..... 2 or 4%

Mental defect included those only who tested under 12 years (Yerkes-Bridgman Scale)13 or 26%
Alcoholic deterioration plus other grave affections 3 or 6%
Morphine deterioration 1 or 2%
Insane 7 or 14%

As criminal careers begin almost always in adolescence, perhaps the best individual and social prophylactic work is that of Dr. Healy, formerly of the juvenile court in Chicago, now in Boston, whose comprehensive studies of individuals and practically useful work have brought about similar institutions in the country. Dr. Healy does not concern himself much with theories of responsibility but has a passion for facts in individual cases, whether in the person or the environment. Dr. Healy has a suite of rooms in an office building downtown where, with a psychologist and social workers he can make the widest investigation of cases sent him from the juvenile courts and elsewhere, keeping thorough case histories—fresh summaries being made from time to time as the cases are "followed up," and where, in connection with the established agencies in Boston, he can practice a remarkably effective criminal therapy. It is surely a good omen to see Judge Cabot of the juvenile court visit this office mornings to get data on the proper disposition of cases brought before him.

Such clearing houses can be established and maintained in an office suite in any community with surprisingly little expense, operating, as they can with already existing agencies (social, medical, charitable, etc.). They should strongly appeal to the philanthropically inclined in this direction because of their great individual and community value. Of course they must have experts (psychiatrist, psychologist, social workers) who have the confidence of the necessarily co-operating agencies just as a business house has credit in the community.

Concluding, I cannot at this time set forth the problems in our own state and its special need of an organization under the National Committee of Mental Hygiene. The State Medical Society at its last meeting passed a resolution favoring a Mental Hygiene organization in this state. The advantage of coming into the movement lies for the present largely along the lines of educational propaganda after the manner of the anti-tuberculosis

movement—to set out the problems widely. That is the *sine-qua-non* for laying the foundation and that surely should begin with the physicians. As to the specific requirements of our state, each state has its own particular problems. Perhaps it is not too much to hope for a possible State Board of Mental Hygiene after the suggestion of Dr. Copp.¹⁹ The situation is rather favorable to such a thing under our somewhat immature development of state administrative authority and in a community in which these problems are still young. We cannot expect to match the activities of some of the Eastern states at once. They set the goal, but it is high time we make the start.

Goldsmith Bldg., Milwaukee, Wis., Dec. 1st, 1917.

FRENCH LITANY.

A bit of French litany, a little philosophy of the French soldier, is before me. It is headed, "Nothing to Worry About."

"You have two alternatives: Either you are mobilized or you are not. If not, you have nothing to worry about.

"If you are, you have two alternatives: Either you are in camp or at the front. If you are in camp, you have nothing to worry about.

"If you are at the front, you have two alternatives: Either you are in reserve or you are on the fighting line. If you are in reserve you have nothing to worry about.

"If you are on the fighting line, you have two alternatives: Either you scrap or you don't. If you don't, you have nothing to worry about.

"If you do, you have two alternatives: Either you get hurt or you don't. If you don't, you have nothing to worry about.

"If you do, you have two alternatives: Either you get slightly hurt or you get badly hurt. If slightly, you have nothing to worry about.

"If badly, you have two alternatives: Either you recover or you don't. If you recover, you have nothing to worry about. If you don't and have followed my advice clear through, you have done with worry forever."

The name of the author of this philosophy does not appear. Perhaps some French soldier who had acquired the "happy habit" first put it into writing. Nevertheless, it is said that thousands of fighting Frenchmen now know it by heart and have made it their philosophy of army life—The Silent Partner.

¹⁹Dr. Owen Copp "State Organization of Mental Hygiene."

SURGICAL VERSUS MEDICAL TREATMENT OF GOITER.*

BY ERNEST V. SMITH, M. D.,

FOND DU LAC.

The surgical treatment of goiter has been almost entirely developed by the present generation, but the medical treatment dates back several hundred years.

The first Thyroidectomy was done on March 20, 1791, by Desault,¹ who removed a tumor which was two inches in diameter from the right lobe of the thyroid. During the period between 1800 and 1820, Dr. Hedenus,² of Dresden, operated upon six cases of goiter with success. A detailed description of one of these cases is recorded, and is very interesting because of the great difficulty which was experienced with hemorrhage at the time of the operation, and secondary hemorrhage due to infection. Pressure by the hands of assistants was required for eight days to control the primary hemorrhage. A secondary hemorrhage occurred on the 16th day and further pressure was employed.

Ligation of the superior thyroid vessels was first done by Walther³ of Landshut, on the 3rd of June, 1814. "The patient was a young man 24 years of age, whose breathing was much impeded by a 'Bronchocele,' and whose upper thyroid arteries were very large and affected with strong pulsations." The left superior thyroid vessel was ligated and the report states that "as early as the third day after the application of the ligature the left part of the tumor became less tense and the throbbing feeling in it soon ceased. In a fortnight the left half of the swelling was one-third smaller than before the operation and at length only one-third of it remained. On June 17th, Walther ligated the right superior thyroid, and following this the right side diminished in size. Two years afterwards the tumor produced no inconvenience and respiration was quite easy."

During the first half of the last century the insertion of setons into large goiters was frequently practiced and in some cases with signal success. This might be especially true in the large cystic goiters.

In a treatise on Surgery by Samuel Cooper,⁴ of London, published in 1854, there is this state-

*Read at the 71st Annual Meeting of the State Medical Society of Wisconsin, Oct. 3-5, 1917.

ment: "He would be a very bold surgeon indeed who would attempt the removal of a 'Bronchocele' (or goiter) because of the many large blood vessels which supply it."

Aided by antiseptic technique and the uses of anesthetics, surgery has made such marvelous advancement during the past fifty years that now the ligation of the superior thyroid arteries is a minor operation and thyroidectomy is a common operative procedure. Since the surgery of the thyroid gland has become so common the tendency has been to forget all medical treatment and resort in too many cases to operative measures. I firmly believe that the pendulum has swung too far in this respect and that in the future more thorough medication should be employed.

After reviewing the literature on the operative treatment of goiter which had been published up to the year 1854, Cooper⁵ makes this statement: "On the whole, I consider that the practice of tying the thyroideal arteries is generally a safer experiment than the removal of the gland with the knife. But now that the efficacy of the preparations of iodine in many cases of bronchocele has been fully proved it is to be hoped that few cases will present themselves in which either measure will be absolutely necessary.

Between 1750 and 1820 the standard medical treatment for goiter was the ash of burnt sponge. The value of burnt sponge was thought to be greatest when exhibited in the form of a lozenge composed of 10 grs. of this substance, ten of burnt cork, and the same quantity of pumice stone. These powders were made into a proper form with a little syrup and the lozenge was placed under the tongue and allowed to dissolve. To the latter circumstance much importance was attached.

In 1820, or 70 years after burnt sponge became the accepted treatment for goiter, Dr. J. C. Straub⁶ published a paper in which he showed that the active principle in burnt sponge was iodine.

Following this publication, iodine in its various forms rapidly replaced the use of burnt sponge and soon became the standard medical treatment.

Friction, or rubbing the goiter with a rough towel, was highly advocated, especially when iodine was used in an ointment. Dr. Coster⁷ was the first to recommend the use of electricity and iodine, and in an article published in July, 1823, he describes in detail his method.

It is now a well known fact that some individ-

uals are very susceptible to the iodides. Berg⁸ has reported several cases of patients receiving full doses of iodides who rather suddenly developed the symptoms usually noted in hyperthyroidism. Physicians writing in the early part of the past century recognized that there were cases of bronchocele that were made much worse by the use of iodides. The following paragraph was written many years before the time that the train of symptoms known today as "hyperthyroidism" was recognized.

"After a few weeks skillful administration of potassium iodide the external swelling will gradually disappear. Should the patient, while under the course of it, experience any considerable quickening of the pulse, a rapid loss of flesh, palpitation of the heart, a dry cough, restlessness and want of sleep, with an increase of appetite for food, though the swelling should undergo diminution, it will be necessary to intermit the medicine for some days and afterwards resume the use of it when the health and safety of the patient will permit."

There can be no doubt but that a few cases of goiter can be driven into a state of thyroid intoxication by the iodides, but I think that the danger of producing hyperthyroidism by iodine medication has been greatly overestimated, and in many cases the benefit which might be obtained from such administration is lost because a thorough course of treatment is not persisted in.

The administration of thyroid extract and desiccated thyroid is essentially the same as the administration of iodine in a form which is easily metabolized.

The work of Kendall,¹⁰ and the separation of the different types of iodine from the thyroid gland is very interesting, and his use of one of these types in the treatment of cretinism is one of the marvels of medicine.

I showed in a previous paper⁹ that the normal thyroid gland could be made to increase its iodine content threefold by the application of the tincture of iodine to the skin at repeated intervals, and that the increase was greater following the application of the tincture than by the usual methods of internal administration.

Many series of cases were reported in the past century where large percentages were cured and great benefit was obtained by the iodine treatment. As early as 1825, Manson,¹¹ of London, reported a series of 120 cases which he treated with iodine,

using it both externally and internally, 15 were in males and 105 in females. He reported 87 cured, 10 much relieved, and only two or three were discharged without any relief.

For the purpose of discussion, I wish to classify all goiters into three main groups, i. e., Exophthalmic, Toxic Adenomata, and Colloid.

First in the Exophthalmic of Hyperplastic Goiter, the treatment should always be primarily medical and secondarily surgical, if it becomes necessary. I do not believe that every case of exophthalmic goiter is a surgical case, any more than I believe that every case which gives symptoms of duodenal ulcer is a surgical case. Every means known to medical science should be employed before resort is made to surgical treatment. Among the most valuable means of treatment I would mention absolute rest, and the ice bag over the heart and proper diet.¹² By proper diet I mean a diet which is as nearly protein free as possible and with an abundance of carbohydrates. Rest both before and following the operation is very essential. Everything possible should be done to inhibit the increased exchange and over active metabolism occurring in these patients.¹² "As far as the internal medicinal treatment of Basedow's disease is concerned, it must be sorrowfully stated that all attempts to find a specific method of treatment have up to the present not led to certain results."

There is no doubt but that hyperthyroidism in many cases is a self-limited condition. Many cases are seen which have existed for a number of years and gradually improve.

The ligation of the superior thyroid arteries has proved a valuable procedure in the extreme cases of hyperthyroidism as a means of preparing the patient for the more radical operation of resection. Patients who are at the height of an attack of hyperthyroidism should always be treated by non-operative measures until the severity of the intoxication has begun to subside.

Of all types of surgical cases, Crile's¹³ Anoci-association principles are the most valuable in exophthalmic goiter. They are based upon common sense facts and are especially applicable to this form of nervous intoxication.

Statistics which have been compiled regarding the operative cure in exophthalmic goiter show a wide variation. ¹⁴Judd and Pemberton report 45 per cent cured and 23 per cent greatly improved as the result of operative treatment. It is interesting

to note that a report from the same Clinic in 1907 gives the percentage cured at 78.2 per cent and the percentage of cases greatly improved at 19.6 per cent. Kocher in 1907 reported 93.7 per cent cured, but he makes no classification of cases improved. Von Eiselburg in 1911 reports 61.4 per cent cured and 34.1 per cent greatly improved. It would seem from a review of all the data obtainable on the subject of operative cure that recovery can be expected in about half of the cases, and that one-half of the remaining number will be benefited.

In the second group, or the Toxic Adenomata, we may have two types of symptoms. The symptoms due to chronic poisoning and those due to pressure. when the latter symptom is present it is certainly our plain duty to give the patient relief by removal of the pressure. In those cases where the results of the chronic intoxication exist, one has many factors to consider before advising the removal of the gland. Often it is advisable to reduce the blood pressure and rest the heart for a period of three weeks or more before attempting an operative procedure. I know of no type of case where pre-operative treatment produces such gratifying results as in these patients with toxic adenomatous goiters.

As illustrative of what I mean by pre-operative preparations in this type of toxic adenomatous goiter, I wish briefly to outline one case.

Case A. Patient, female, age 47 years, came to us for examination on January 25, 1917. Patient had had a goiter for 20 years. Her general health had been good up to about three years ago, at which time she became very nervous and experienced severe palpitation and shortness of breath on exertion. Her blood pressure for three readings at the time of the first examination averaged 215 systolic and 120 diastolic. Her pulse was 130 and a marked tremor was present. She had lost 50 pounds in weight during the past three years. Weight being 125 pounds. On February 3rd the patient entered the hospital and was placed in bed at absolute rest. Ice bag to precordial region continually. She was given a protein free diet and the bowels were kept clean with salines. The only medicine given was 15 grs. of bromide each evening at bed time. By the end of the first week her pulse was 90 and her blood pressure had dropped to 180. On the 19th day her pressure was 165 and pulse 76. She was operated on the 22nd of February under combined local and general anesthesia at which time nearly all of the left lobe of

the thyroid was removed, which contained multiple adenomata ranging in size from marbles to a hen's egg. An adenoma the size of a hen's egg was also enucleated from the right lobe. The patient made a splendid post-operative recovery. She was kept in bed for seven days after the operation and was discharged from the hospital on the 12th day. She was impressed with the fact that she should do no work, and lead a very quiet life for the first six months after the operation. She has gained thirty pounds in weight since leaving the hospital, her blood pressure is now 150 systolic and 80 diastolic, and she says she feels perfectly well.

I am convinced that pre-operative and post-operative treatment is an invaluable adjunct towards the successful outcome in such cases.

With the third or Colloid Goiters, medical measures often produce wonderful results. The simple colloid goiter, which frequently develops at puberty in many instances responds very rapidly to external or internal medication with some form of the iodides. Many of them will disappear before the adult age is reached if nothing is done. The true colloid goiter seldom causes pressure symptoms unless complicated with adenomata. They may cause so much disfigurement that for cosmetic reasons alone an operation is advisable.

There can be no doubt that the thyroid gland plays an important role in both the mental and physical development of the individual during adolescence. There should be less surgery and more non-operative treatment used in the care of these patients.

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"REMEMBER"

When the men of the army or the navy make up their mind to "remember" something, they do not forget. And they "remember" by acting. The Alamo was "remembered" and the Maine was "remembered"—not in bloodthirsty hatred, but in the spirit of justice. It is proverbial that Americans are slow to anger, that their good nature can stand a great deal of rubbing the wrong way before it becomes bristly. But, as was demonstrated in the Revolutionary, Mexican, Civil and Spanish-American struggles, the just anger of the American is shown not by wordiness, but by action.

Because the American people as a whole have not been giving expression from the housetops to hatred over the unrighteous methods employed in German warfare, the German autoerats have been trying to convince the German masses that America's heart is not in this war, that the stalwarts of the new world are being dragged into military service. Not long ago a handful of American engineers fought an overpowering force of Germans and fought it to a standstill. It was then that some of the Germans at least were convinced that the new foes could be "fighting mad".

"Men can be fighting mad," said an American army officer recently, "even when they are smiling." It is said by those who know him that General Custer always wore a gentle smile, even while in battle, and that he never allowed himself to become ruffled or excited. Whatever anger the American fighting forces show will be shown in action—and then these forces will prove their ability to fight against the finest of the kaiser's warriors.

"Now, in this 'remembering' business, the men of the navy and the men of the army have determined to 'remember the Tuscania' and the gallant lads who went down with her. But these men should not be expected to do all the 'remembering'. The whole nation should 'remember' that disaster, and every man, woman and child in the land can do so. All of us cannot go to the fighting front and do our 'remembering' but every one of us who stays at home can 'remember' that disaster and the illegal method by which the Tuscania was sunk, by lending the Government money with which to right the great wrong. Every person who buys Liberty bonds can put himself on record as having 'remembered' the Tuscania and the lads who lost their lives when she was torpedoed off the Irish coast."

DIFFERENTIAL DIAGNOSIS OF FORMS OF GOITER.*

BY J. F. PEMBER, M. D., AND T. W. NUZUM, M. D.,
JANESVILLE.

H. G. Sloan,¹ in an article published in 1916 in which he discussed the goiter problem, comes to the conclusion, that the varying types of thyroid enlargement, from colloid goiter to Graves' disease, are one, varying only in degree and intensity. The colloid goiter will ultimately give toxic symptoms (myocarditis) and should always be removed, though in the first stages iodine may control the goiter. The toxic symptoms of Graves' disease are the result of an over-abundance of thyroid secretion, which damages the whole body.

The forcible heart beat (pyknicardia) is the result on the heart of the excess of adrenalin arising from the adrenals through over stimulation from the brain by way of the splanchnics. The excess thyroid secretion stimulates the output of nervous activity through the central nervous system which in turn stimulates the thyroid to still greater activity, causing a vicious circle which must be broken, either at the focus of infection or at the thyroid by thyroidectomy.

George W. Crile² recognizes as exophthalmic goiter every case in which at the time of operation there are symptoms of increased basic metabolism, not due to any current, exciting cause, and in which the symptoms are relieved or cured by diminishing thyroid activity. Considering goiters in this light, he finds about fifty per cent of his cases of the toxic type. We intend, therefore, in this discussion to consider all forms of goiter as toxic or potentially toxic, and believe that they should all be treated alike. We will mention the different anatomical types of goiter with a word as to their pathology and diagnosis, but will not dwell on unimportant details.

Benign enlargements of the thyroid gland are known by the general name of goiter. If the enlargement is malignant, carcinoma or sarcoma, that adjective is prefixed. The enlargements of the thyroid may be diffuse or partial, may involve the parenchyma, the stroma, the blood-vessels, or all three. When there is an increase in the parenchyma and the relation of the structures remains

normal it is known as parenchymatous goiter. If the contents of the follicles increase, it is spoken of as follicular goiter, and if the stroma is involved it is known as fibrous goiter. Increase of blood-vessels gives rise to vascular goiter.

Partial hypertrophies, which are more common than diffuse, except in adolescence, may involve any of the lobes. If parts of the gland undergo cystic degeneration we have what is known as cystic goiter, a very common type. Further, there must be considered the small, circumscribed, nodular tumors, which are congenital or appear at about the age of puberty with the histological structure of embryonic gland tissue, which are known as Wölfler's fetal adenomata. Further, accessory thyroids may appear in various positions and are important only when they lie under the sternum and give rise to pressure symptoms. The pathology of inflammatory enlargements need not be described. The malignant types are confined to carcinoma and sarcoma.

Consider briefly the differential diagnosis of these forms of goiter. First, we recognize the enlargement and whether it is diffuse or circumscribed. Its anatomical situation and the fact that it moves up and down with the act of swallowing serves to connect it with the thyroid gland. Careful inspection of the individual, his attitude, mental condition, and of his neck, often gives enough information. We notice the size and situation of the tumor, and whether it involves one or both lobes, or the isthmus. Cyanosis or congestion of the face and dilated veins indicate pressure. Contracted pupils, partial ptosis, flushing of the affected side, etc., indicate paralysis of the sympathetic. Irritation causes dilated pupil, sometimes exophthalmos, paleness of the skin, etc.

We palpate the tumor carefully and note its mobility. It is usually quite movable, unless wedged into the superior aperture of the thorax, or is one of those rare forms that surround the trachea. Imobility suggests malignancy as well as adhesions to the skin. It may also indicate inflammation. Extreme tenderness or pain suggest inflammation, or abscess. We next determine the presence of cysts and hard fibrous nodules. Displacements of the larynx or trachea are noted. With a stethoscope applied to the tumor harsh breathing may be heard, indicating compression of the trachea or involvement of the nerves of the larynx. The presence of thrills, bruits, and soft systolic murmurs,

*Read at the 71st Annual Meeting of the State Medical Society of Wisconsin, Oct. 3-5, 1917.

are typical of thyro-toxic and exophthalmic goiter. By laryngoscopic examination we determine paralysis of the recurrent laryngeal nerve, which may be caused by pressure or stretching.

As a general thing, diffuse hypertrophies are less common in this country than in certain foreign countries where goiter is endemic. Most of the types seen here are circumscribed or cystic goiters.

Simple hyperemia or the diffuse parenchymatous type of the thyroid occurs for the most part in women of marriageable age and young girls. It is associated with puberty, menstruation, or pregnancy, and is the type which usually precedes most forms of goiter. Lack of iodine in the system is said to be the cause of this compensatory hypertrophy, which is easily controlled by administration of iodine. The gland is moderately enlarged, of firm consistence, with a smooth surface or here and there rounded elevations caused by groups of follicles.

Sloan¹ points out this form of goiter as of special importance because he believes it to be an incipient exophthalmic goiter, and should be differentiated from the enlargement of the thyroid which appears in incipient tuberculosis with which it is often confused. Only careful study of such cases will make it possible to make a differential diagnosis. In the adolescent type there may be thyroid enlargement with or without toxic symptoms (compensatory hypertrophy); or the heavy type seen chiefly in boys. It is usually accompanied by acne, the intestinal tract being the underlying cause. Operative interference is not indicated in the adolescent type.

One or more nodular prominences appearing at the time of puberty which grow very slowly or remain stationary and do not reach a size larger than an egg and cause no other symptoms are often fetal adenomata.

Diffuse colloid goiter occurs for the most part in women of middle life; it is of slow growth, may attain a large size, is symmetrical or may form large tumors having a soft doughy consistency. If very vascular the tumor may be diminished in size by firm pressure, but enlarges as the blood re-enters the blood-vessels. In connection with old colloid goiters a condition of hypertonus is often observed in which there is usually no loss of weight, but the heart beat is irregular and forcible and the blood-pressure may run from 180 to 200 mm. of mercury. Thyroidectomy gives relief but

should not be performed until after the damaged heart muscle has been properly supported by digitalis. A form of "cold Graves' disease" is also described which occurs in women of middle age in whom constipation is referable to intestinal stasis. Rest, nourishment, and proper elimination, are the chief factors in this treatment.

Fibrous goiter is a comparatively rare form. It occurs in persons of advanced life and is characterized by the formation of nodules of dense, hard tissue, disseminated throughout the substance of the gland.

Cystic goiter is common in this country and occurs in all forms of hypertrophy. The diagnosis is not difficult if the cysts are not too deeply placed. When severe hemorrhage into the gland substance occurs, sudden and severe pressure symptoms may result. Care must be used in the operative treatment of cystic goiter, for the gland substance may be so completely destroyed by cystic degeneration that a removal of too large an amount of the tumor will cause subsequent myxedema.

So-called movable tumors of the thyroid are often described as are also accessory thyroid tumors. These are particularly important when they are located below the sternum, in which place they may cause serious pressure symptoms.

Inflammatory conditions of the thyroid are often followed by abscess formation and usually accompanied with more or less general sepsis. Local pain, swelling, followed by redness of the skin and evidence of abscess formation are to be looked for. In abscess of the thyroid the chin is depressed toward the sternum, especially during the act of swallowing. There is also marked tightening of the muscles due to the pressure over the abscess. Of the chronic inflammations, syphilis, tuberculosis, and echinococcus disease must be mentioned. These diseases seldom attack the thyroid.

Both sarcoma and carcinoma of the thyroid gland occur with moderate frequency, especially in goitrous regions and in thyroids already the seat of benign enlargements. A. J. Ochsner³ in a series of eight hundred cases found thirteen that were malignant. Any of the types of sarcoma may occur, infiltrating one lobe or the entire gland. It is characterized by rapid growth and early infiltration of the surrounding tissues with serious pressure symptoms occurring rather early. Serious obstruction of the esophagus may result from malignant infiltration while in benign conditions ob-

struction to the esophagus seldom occurs. The skin is rarely involved and destroyed with ulceration. It is a disease of early adult life. The tumor is movable so long as it remains within the capsule; The consistence varies with the type of tumor and metastases to the bone and lung occur early.

Carcinoma of the thyroid, as in other localities, is a disease of advanced life. The alveolar type or soft medullary carcinoma is the more common, and progresses more rapidly, the scirrhous type occurring rarely. A third type known as adenoma carcinoma is rare but interesting, in that its metastases do not occur along the lymph channel. The thyroid may remain normal in size and yet metastatic tumors form which recur even after removal. These occur most commonly in the bone and are sometimes solitary affecting particularly the lower jaw, clavicles, ribs, and long bones. Their growth is slow so that years may elapse before the condition becomes notable. The alveolar type occurs in advanced life and in goitrous glands rather than in normal ones. The tumor begins with a nodule, grows rapidly, infiltrates the whole gland, perforates the capsule, involves the surrounding tissue and nearby lymph glands, giving rise to early pressure symptoms and severe pain. These tumors, however, may reach a large size without serious symptoms, so long as they stay partly within the capsule. The scirrhous carcinoma occurs in elderly people, is usually small, very hard, and produces marked pressure symptoms, although the duration of life is longer than in the other two forms.

We will next take up the subject of the exophthalmic goiter. Sufficient work has been done of late on this subject to demonstrate with a high degree of certainty that exophthalmic goiter is not a pure expression of thyroid activity but that it represents the combined result of excessive function of the thyroid, the suprarenal, and the cervical sympathetic. Within the gland itself we find the primary hypertrophy and hyperplasia of epithelium which is pathognomonic of exophthalmic goiter, in contrast to the varied group of toxic hyperthyroidism including the pseudo-exophthalmic which show primary retention of colloid with epithelial atrophy, the encapsulated adenomata, and the carcinomata.

L. B. Wilson⁴ has demonstrated definite degenerative changes in the superior cervical and other sympathetic ganglia in exophthalmic goiter. These

changes vary in degree with the severity of symptoms.

The continuity of events leading up to exophthalmic goiter are stated by E. H. Reede⁵ as follows:

A period of infection leading up to the hyperplasia of the thyroid, and a goiter with or without symptoms, and often beginning in childhood.

A period of increased physiological demand inducing hyperthyroidism.

The stage of rapid metabolism and highly sensitized bodily functions known as hyperthyroidism.

The period of emotional stress in which originates the stimuli of suprarenal secretion.

The stage of suprarenal over-secretion with the appearance of general sympathetico-tonic symptoms and localization of the brunt of the effect on the cervical sympathetic.

The stage of degeneration and breaking down of the cardiac, mental, nervous, thyroid, and suprarenal mechanisms.

Crile² states that the symptoms of exophthalmic goiter are those produced by the combined administration of epinephrin and thyroid extract, plus those due to deterioration produced by the disease in certain organs, including the heart, the brain and the liver. Epinephrin increases basic metabolism, as is evidenced by an increased temperature; it increases the force and frequency of the heart beat, increases blood-pressure; throws the blood from the inner large arterial trunks to the periphery; dilates the pupil; produces sweating and increases respiration. But epinephrin does not alone lower the threshold of the brain, does not cause nervousness, trembling and insomnia. These are caused by thyroid secretion. These two groups of phenomena together with the modified function of the damaged organs as the liver, the heart, and the brain, make up the sum total of exophthalmic goiter. That worry, fear, grief, infection, overwork, adolescence, auto-intoxication, etc., are common exciting causes of exophthalmic goiter seems to be generally accepted. H. McKenzie⁶ believes that the severe emotional strain on millions of people during the present war will cause an increase in the number of cases of the disease.

The symptoms of exophthalmic goiter are (1) enlargement of the thyroid gland; (2) protrusion of the eyeball; (3) tachycardia; (4) tremor; (5) associated symptoms, constant and inconstant. The disease is more common in women than in men.

The patients are often neurotic or hysterical individuals. Anemias and hemorrhage and other distressing symptoms appear to act as predisposing causes. The thyroid may be somewhat enlarged, symmetrical, and usually of soft and medium firmness, the size rarely great enough to cause pressure symptoms. There is an increase in the palpebral angle of the eyelid, and when the patient is directed to look downward the upper lid in its motion lags behind the eyeball. There is absence of power to converge the axis of the two eyes. The patient winks less often than normal. The action of the heart is rapid, 120 to 140 beats to the minute or more. Palpitation and tumultuous action of the heart occur upon slight mental or physical disturbances. Attacks of angina pectoris occur in bad cases, and are often associated with myocarditis.

Muscular tremor is a constant symptom and is not unlike that of chronic alcoholism, most marked in the hand, but also involving the muscles of the trunk. Choreic movements may be present. Hysterical attacks are common as are nervous irritability and other symptoms of neurasthenia. There is increased secretion of sweat, vaso-motor disturbances, flushing, edema, and pigmentation. The patient may become anemic, suffer from muscular weakness and inanition. The disease is fatal in a considerable number of cases that run an acute course, chiefly from conditions referable to degeneration of the heart muscle. In other cases diarrhea constitutes a serious menace to life. We must emphasize the fact that any of the characteristic symptoms of the disease may be absent. Further, that all forms of goiter, cysts, and tumors of the thyroid gland may be associated with symptoms of exophthalmic goiter.

Various laboratory methods have been devised which aid somewhat in the diagnosis of thyroid intoxication, though many of the methods are so complicated that they have little practical value. The blood picture shows a leukopenia with a relative increase of lymphocytes. W. M. Boothby⁷ has devised a means of estimating basic metabolism, by which method he can estimate the degree of thyroid intoxication. Boudoyin and Poraek found that after a hypodermic injection of extract of the lobe of the hypophysis, the pulse of a normal individual accelerated, while that of exophthalmic goiter patients became perceptibly slower. Poewis' test is dilatation of the pupil of exophthalmic goiter patients following instillation of 1:1000 adrenalin

into the conjunctivae; this test is also positive in diabetes.

Occasionally we are called upon to make a differential diagnosis between hyperthyroidism and myxedema or hypothyroidism, which is the opposite of exophthalmic goiter and is due to lack of thyroid secretion. The condition occasionally follows operations for goiter where the symptoms have been misjudged or too much of the gland removed. It often occurs in goiters of long standing which have undergone extensive degeneration. In myxedema the gland is small; the circulation is accelerated; the skin is thin, warm, and will undergo sweating, and the patient is weak and irritable.

Many times the symptoms referable to the heart are so marked that one may overlook the patient's nervousness, tremor, or even exophthalmos. Just recently there came to our notice a case that had been treated for several months as a heart case, and yet was one of the most acute types of exophthalmic goiter. The eye symptoms were not marked, except on close observation, and yet the man's heart was so weak, that the pulse could hardly be counted, and upon the slightest exertion he would become faint or even unconscious.

On the other hand one is even more apt to make a diagnosis of exophthalmic goiter or thyro-toxic goiter in many instances of cardiac, renal, or nervous disease, in which there is present a moderate degree of thyroid enlargement, and a naturally prominent eyeball. A positive Stellwag may also be present. Thyroid enlargement has been observed in all the acute infections, but more especially in incipient tuberculosis. An infection in a person whose thyroid has only a small functioning capacity is prone to give thyroid hypertrophy. In the presence of thyroid enlargements therefore, we must not fail to search out the underlying causes of the hypertrophy, for it is readily seen that thyroid enlargement is quite as often a symptom as a primary disease, if not in the majority of cases.

A still more common condition with which exophthalmic goiter or thyroid intoxication is confused is neurasthenia, and there is little wonder for, as Crille points out, the underlying causes such as worry, fear, grief, infection, overwork, adolescence, auto-intoxication, etc., are the common exciting causes of both neurasthenia and exophthalmic goiter. Consider neurasthenia for a moment. It is produced by the same environmental stimuli

which give rise to exophthalmic goiter and occurs for the most part in the same type of patients. It is relieved by rest, by controlling work, by eliminating worry, infection, auto-intoxication, etc. In many cases the diagnosis of one physician is light exophthalmic goiter, by another, neurasthenia. The two diseases could readily be considered as varying degrees of a similar process.

However, Plummer* of the Mayo Clinic points out very clearly the differential diagnosis between these two conditions. He maintains that hyperthyroidism shows a definite reaction in its signs and symptoms commensurate with the size of the dose of thyroid secretion; that a pulse rate of 120 associated with cold, dry hands, means that hyperthyroidism can nearly always be excluded, because a dose sufficient to produce such tachycardia will necessarily cause vaso-dilatation with warm, moist skin. In history both show a marked fluctuation in severity of symptoms, but the wave lengths of remission in neurasthenia are much shorter and more regular than in exophthalmic goiter. Too much stress is laid on the history of nervousness, palpitation and tachycardia. The nervousness of an exophthalmic goiter patient is first noted by friends as a certain restlessness, and a desire to be over-active all the time. Palpitation and tachycardia are often met with in other conditions and are only important when associated with signs or symptoms of increased metabolism such as good appetite, hyperhidrosis with a subjective sensation of heat. This must not be confused with transitory hot flashes and cold sweats of the neurasthenic, who likewise will complain of a poor and capricious appetite, and who is usually very introspective, which is the exception in exophthalmic goiter cases.

The nervously depressed patient with neurasthenia presents a marked contrast to the exophthalmic patient. The former on entering the examining room walks languidly across the floor and sinks into the chair with a deep sigh, utterly exhausted. Upon mounting the examining table it is with an appearance of utter exhaustion which symptom is purely subjective there being no true myasthenia.

The exophthalmic goiter patient walks briskly across the room, sits straight up in her chair and gives the picture of physical and mental animation. She underestimates the seriousness of her condition, walks to the examining table, and is much chagrined to find that she cannot mount without assistance. The weakness of the quadriceps ex-

tensor muscle is quite characteristic. If a patient neither looks nor acts as if intoxicated from the thyroid, the history and physical examination will seldom give the necessary evidence on which to base a diagnosis. The tachycardia in the neurotic patient fills her with apprehension; the tachycardia in the thyroid case is more regular and less subject to slight external influences. The tremor of the two conditions may be similar but that of neurasthenia is intermittent. In the examination of the throat the hyperplastic thyroid of exophthalmic goiter stands out more definitely and feels granular to the fingers. Thrills and bruits are heard over the superior thyroid vessel in 80 per cent of the cases; and a large percentage of cases show a faint but distinct harsh, blowing, systolic murmur in the pulmonary area, two signs not found in neurasthenia.

Conclusions: 1. As we study the literature we find that there is a growing tendency to disregard the old classifications of goiter and consider the subject of goiter as a whole and treat it more or less as one type.

2. That the pathology found in these enlarged glands appears to be more or less secondary to infection in many cases or to some profound disturbance of the nervous system which calls for increased thyroid output, which in turn produces changes in the sympathetic nervous system, adrenals, and other organs of the body. The combined effect of all of these changes makes up the picture of exophthalmic goiter and the varying degrees of hyperthyroidism.

3. That the differential diagnosis is not difficult if careful study is made of each case and that the greatest difficulty arises in the differential diagnosis of some of the border-line cases of thyrotoxic goiter which are so often confused with enlargement of the thyroid due to the presence of infections or to other diseases more particularly to incipient tuberculosis or neurasthenia.

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DISCUSSION.

DR. F. GREGORY CONNELL, Oshkosh: Mr. Chairman and Gentlemen: I am very glad to concur most heartily with the sentiments expressed by Dr. Smith and would urge that they be impressed upon the minds of the surgeons of the state.

In an attempt to emphasize I shall repeat from the doctor's paper. "Since the surgery of the thyroid gland has become so common the tendency has been to forget all medical treatment and resort in too many cases to operative measures. I firmly believe that the pendulum has swung too far in this respect and that in the future more thorough medication should be employed."

Surgical treatment of goiter is, of course, merely a makeshift, to be judiciously utilized until a better method is discovered and accepted. The enlargement of the thyroid is but one of the symptoms and, like other symptoms, the result of an underlying cause. By removing the thyroid gland we remove one of the results of this cause, and probably secure an improvement by breaking up a vicious circle, by the removal of the source of the irritating thyroid secretion.

The doctor next speaks of iodine and is not afraid to administer iodine in large and continued doses. I have seen cases of goiter made worse by the administration of iodine and of thyroid extract, which are probably the same. I would, therefore, in discussion, emphasize the possible danger of this line of treatment, and urge that if it is carried out, that the possibilities of an acute thyroid intoxication be watched for and recognized early. Personally, in goiter cases coming to operation I use alcohol on the skin instead of the customary iodine.

Reference to Manson's report from London in 1825 to be of value, must include the ages of the patients. One hundred and five of his 120 were females. It would not be difficult to secure similar results with any or no line of treatment in many series of 105 females, if the adolescent type were included.

Regarding exophthalmic goiter, I would repeat that treatment is always primarily medical, or rather non-operative. The treatment consists of rest, diet, which must include boiled water, hygiene and lastly, medicinal. Iodine, thyroid extract and digitalis are contraindicated. The use of the X-ray in the treatment of Grave's disease is a subject of discussion.

Granting the necessity of an operation, the proper time for such operation is of the utmost importance. Operation should not be done during an exacerbation of the symptoms. The type of operation calls for the most careful surgical judgment. Palliative operations, such as ligating the poles of the gland, including in the ligature not only the artery but also the lymphatics, the nerves, and the veins, or the injection of the boiling water as advocated by Porter, may be indicated as a preliminary step: but either may be accompanied by serious post-operative symptoms.

After such palliative operation and improvement, the radical procedure should always be advised during this period of improvement, as almost invariably a recurrence will otherwise take place. Regarding the techni-

que of the operation itself, gentleness is of the utmost importance, hence one of the great advantages of the local anesthesia. Hemorrhage must be carefully prevented, and drainage always established. Ochsner advocates gastric lavage and it is advantageous. Ochsner also advises transfusion into the large veins of the neck just previous to the operation, but it would seem that if such a transfusion were indicated, that because of this, the operation itself was contra-indicated.

The operation itself is not *all* of the treatment. The importance of preliminary treatment has been emphasized, but until recently the post-operative treatment has been overlooked or ignored. Proper supervision of the after treatment is essential to a successful result, and the method of giving the patient printed directions regarding the post-operative management is worthy of imitation.

Concerning the results of the operative treatment, the essayist's statement that recovery may be expected in one-half of the cases and that one-half of the remainder will be benefited, is eminently fair. The reason for this large proportion of unsatisfactory results should interest us very much. One well recognized and active reason is that many cases are too far advanced, of too long standing for full recovery to follow any line of treatment; another, and I believe a potent one, is that of an incorrect diagnosis. One very frequently meets in the literature a statement like the following, from Seymour: "The diagnosis of hyperthyroidism is frequently overlooked. This is generally mistaken for so-called neurasthenia, and is also frequently confused with early tuberculousis." The reverse may likewise be true; but for some reason has not been equally emphasized.

The statement that one may have exophthalmic goiter *without goiter*, is unquestionably true, but it must be remembered that such a condition is not usual. Fortunately, if one has a broken leg and a goiter, the leg is not lost sight of in an attempt to cure the goiter, but unfortunately if one should happen to have neurasthenia and a goiter, the former many times is completely lost sight of, in a strenuous attempt, often operative, to cure the goiter.

This differentiation between hyperthyroidism and neurasthenia is most difficult and hence important, so much so that Plummer of Rochester realizes the frequent confusion, and attempts to make plain a differentiation, which should be carefully studied by all who presume to make a diagnosis of exophthalmic goiter.

DR. DANIEL HOPKINSON, Milwaukee: Regarding the differential diagnosis of goiter, we have all been able upon occasion to differentiate clinical types by the histology of the gland. A few years ago I was very much impressed by a man who has done a great deal of work in this line, stating that it was usually possible to differentiate clinically by the histology of the organ, and that a given series of symptoms was associated with a more or less definite histological change. The histology has never been more than suggestive to me in determining the clinical type. I believe that the microscopy of the various forms of goiter may be so varied in a given

clinical picture that you require the clinical picture to be sure of the type you are dealing with, and that the laboratory findings alone cannot give you this information. I think it is time we were honest with ourselves in this respect. We all know that frequently the various histologic changes supposed to be characteristic of the different clinical types are very often found in the same organ.

DR. W. E. FAIRFIELD, Green Bay: Mr. President and Gentlemen: The writers of this paper are to be congratulated upon the quality of their work. They have covered the field in an intelligent and intelligible manner. My few remarks will be confined to a brief résumé of a few deductions, which serve to guide us in the giving of advice to patients, as to the choice of treatment for each class of case.

First, we must bear in mind that thyroid hyperplasia may be the direct result of a toxic irritation of that gland, coming from such remote regions as the tonsil, teeth, or other infectious focus. This has been cited by the author, and I only speak of it to emphasize the fact.

Second, we must base our treatment upon the fact that removal of the cause is the first essential.

Third, while degenerative changes in the gland itself may make removal imperative, they cannot absolve the surgeon from an obligation to search for and remove, if possible, the primary causative lesion.

Fourth, when it can be established that the hypersecretion of the thyroid itself is the source of the symptom complex, and when the condition of the patient is such as to permit of interference, there can be but little difference of opinion as to the course which should be pursued. Surgical intervention, and the removal of so much of the gland as will not greatly imperil the life of the patient, is, in my opinion, demanded.

The researches of Pool and Falk have quite conclusively established the inadvisability of a complete bilateral extirpation. The least part that must be left is the posterior wall of one lobe.

During the past year, I have paid more particular attention to the medical and hygienic care of incipient cases of thyroid toxemia than ever before, with the surprising result that cures have apparently been effected without recourse to surgery. In the exophthalmic variety much depends upon an early diagnosis, and prompt and faithful adherence to the rules laid down.

Of the three principal symptoms by which we recognize incipient toxic goitre, I would place tachycardia first. Second, fine trembling of the hands when the patient extends them, increased when the eyes are closed, and third, an excitable, restlessness bordering upon a mild alcoholic intoxication.

Enlargement of the thyroid is not necessarily noticeable. For practical purposes and relating to the course of treatment the essential question to be answered in all goiter cases must be covered by the following:

1. Is this goiter toxic?

2. If not, is it apt to become so?

3. Is the enlargement and hyperactivity primary or secondary?

Ochsner has rightly insisted that all exophthalmic cases should have the benefit and assistance of rest, both physical, mental and emotional, with a carefully regulated diet and under the best possible hygienic surroundings and medical care. If these do not cure, resource is to be had to surgery.

When we have a primary toxemia due to hyper- or perverted goitric secretion, it matters little whether it is from a gland with simple hyperplasia, colloid enlargement, or other pathology. The question of structural classification is, of course, an interesting one, but the operative action is not greatly influenced by the macro- or microscopic picture, unless malignancy or pyogenic infection is present.

In young patients the removal of infected teeth and tonsils with the added precaution of boiling the drinking water, will cure a large percentage of cases. In the toxic forms, no operation should be undertaken until a course of rest, diatetics and mental discipline has been carried out. The mortality is greatly lowered by such preparation.

We are indebted to Drs. Nuzum and Pember for a very excellent paper.

DR. D. N. EIDENDRATH, Chicago: I want to first of all cover several of the points made by Dr. Connell and Dr. Sayle. My own experience has not been as great as that of Dr. Sayle, and I have never been quite satisfied with it, as regards rapidity of the operation, the degree of shock to the patient, and so on. Perhaps I shall be comforted some day. In regard to the general anesthesia, I think there are several factors we are apt to forget, and one is, that the average anesthetist puts his patient so deeply to sleep that there is no opportunity for the mucus to be expectorated and the consequence is he is very apt to have a great amount of secretion which is a source of considerable disturbance to the operator. Since learning this method, and I can recommend it very highly, I have been in the habit of putting the patient as deeply to sleep as necessary and then not giving one drop more during practically the entire operation. This method works like a charm and the person is very much easier to handle than he is under the old method of giving him a general anesthesia all through the operation.

Several points were brought out by Dr. Connell. One was that we do not follow these cases of exophthalmic goiter post-operatively. Too many of these patients are permitted to go back into their old environment. The conditions which produced this hyperthyroidism originally are not properly combatted, and the result is that what little thyroid tissue is there, begins to enlarge again and a great many of these cases have to be operated a second and even a third time. I have seen that condition repeatedly. Another factor that we do not take sufficiently into consideration is the relation of the

larynx to the thyroid. Considerable attention has been paid to this relationship in the German literature, especially by VonHoover. We find that some of these patients who die suddenly, especially after operation, have extreme vasodilatation and are the subjects, or rather the possessors, of thymus glands that are some times almost as large as the thyroid. That may seem exaggeration, but when you hear some of the reference and see some of the pictures you readily believe it. I have had this experience in some of the cases which haven't done very well after thyroidectomy. By subjecting such patients to X-ray treatment, which is the safer remedy, the patients have been greatly improved.

There is one fallacy we all commit and that is that we make the mistake so frequently of simply ligating one little vessel instead of ligating the entire upper pole, as indicated by Doctor Sayle and Doctor Connell.

Morley (The Preparation and Standardization of Ovarian and Placental Extracts. Surgery, Gynecology and Obstetrics, Volume XXX, 1917, 324) gives due emphasis in his article to the need for more uniform methods in the preparation of ovarian and placental extracts. Tangible laboratory and clinical data are still moreover lacking in extent. A review of the more important articles on the above subject reveals the circumstance that it is only within the last ten years that an attempt has been made to isolate the active principle of the ovary and placenta, especially the former. Iscovesco (1908) obtained "lipoids" from the red blood corpuscles, hypophysis, kidney, adrenals, ovaries, the testicles and the corpora lutea, and discovered they exerted a certain action on the female genitalia. The "homo-stimulating" lipoids, he found, had an action on the same organ from which they were derived, the "hetero-stimulating" lipoids exercising an action on different organs—this division he discovered later being purely arbitrary. Herman (1915) believes he has succeeded in separating the "active substance" of the corpus luteum and of the placenta as a specific chemical substance, having identical physiological properties. Herman possibly obtained his so-called active substance in a purer state. After engaging in special research work along this line during the last two years, Morley expresses the opinion that up to the present time no ideal method of preparation has been formulated, and until that is accomplished, standardization of the product will not be attempted. Considering the newness of the subject the article concludes with quite an extensive bibliography.

The weasel is a well known animal. If the heart of this animal is eaten, especially if it be still palpitating, it will make you to know the future, and if anyone eats the heart with the eyes and tongue of a dog, at once he loses the voice. —*De Virtutibus Animalibus. Albertus Magnus.*

CHRONIC NON-SURGICAL PYELITIS: ITS ETIOLOGY AND TREATMENT.*

A STUDY OF SEVENTY-FIVE CASES EXAMINED AND TREATED AT THE JAMES BUCHANAN BRADY

UROLOGICAL INSTITUTE OF JOHNS HOPKINS HOSPITAL.

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The chronic infections of the kidney pelvis are very sharply divided into three classes—the tuberculous infections, the non-tuberculous infections secondary to some anatomical or pathological condition of the kidney pelvis predisposing it to infection, and the non-tuberculous infections occurring independently of any such predisposition.

The first two of these types occur among the surgical conditions of the kidney and upper ureter and consequently do not come under the heading of this paper. They are deserving of mention, however, because it is essential that when present they be not confused with the non-surgical type of chronic pyelitis.

The differential diagnosis between the simple type of chronic pyelitis and the pelvic infections secondary to some predisposing renal condition necessitates the employment of the most detailed means of urological diagnosis. The pathological conditions of the kidney and its pelvis which are most frequently the predisposing factors associated with renal infection are hydronephrosis, renal lithiasis, and renal tuberculosis. In the differential diagnosis of kidney infections these predisposing conditions are excluded by the plain X-ray, the Thorium X-ray and cystoscopy with the use of the waxed-tip catheter and microscopic study of the divided urines. Even more important than these is the estimation of the relative function of each kidney by ascertaining the amount of phenolsulphonephthalein, excreted by each in a given period of time. As a rule the simple pyelitis is not associated with an interference of renal function whereas the pyelitis secondary to renal pathology is associated with a definite decrease in renal function on the side affected.

The etiology of chronic non-surgical pyelitis has never been a subject clearly understood. Until late years it has been the prevailing opinion that such infections occurred by the ascension of an urethral

or bladder infection. Recent experimental investigations and clinical studies have warranted the now general belief that pelvic infections are usually if not always hematogenous in origin.

The normal kidney has a special function which throws no little light upon the etiology of chronic pyelitis. As early as eighteen hundred and ninety-six Biedl and Kraus¹ demonstrated by animal experimentation that live, virulent colon bacilli and staphylococci were eliminated from the blood stream by the normal kidney without damage to any part of the urinary tract. This work has since been confirmed by Cuturi,² Rovsing,³ and others.⁴ Adams⁵ proved even that in artificial intestinal stasis there occurred a migration of live colon bacilli into the intestinal wall whence they were carried to the blood stream by the mesenteric lymphatics being finally excreted by the kidneys without damage to any of the structures traversed.

In view of this experimental work it is quite conceivable that a chronic pyelitis might be constantly kept up by organisms occurring in the urine as a result of a focal source of infection in the intestinal tract or elsewhere. Such a relation has been recently suspected by such authors as Keyes,⁶ Crabtree and Cabot.⁷

If such a suspicion were true one would expect to find a bacteremia in those patients suffering from a chronic pyelitis. There has been very little work done along this line but in those instances in which blood examinations were made, the findings seem to bear out the suspicion. Kowitz⁸ reports five cases in which there was an infectious diarrhea with colon bacilli both in the urine and in the blood. Crabtree and Cabot⁷ found a bacillemia in eight women having a bacillary urinary infection. Broeck⁷ examined fourteen cases of bacilluria associated with infectious diarrhea and found a blood culture positive for colon bacilli in seven of them.

The suspicion that simple pyelitis in adults is secondary to some focal infection is supported by the accepted belief among pediatricians that the chronic pyelitis of infants bears a direct dependence upon a focal source of infection, usually some intestinal disturbance, an otitis media, furunculosis or the like. Kowitz,⁸ Ross,⁹ Thomson¹⁰ and many others report numbers of cases in which there appears little doubt of such a relation.

The very fact that three-fourths^{11, 12, 13, 14} of the non-surgical infections of the kidney pelvis are caused by organisms of the colon group immedi-

*Read before the Milwaukee County Medical Society, November 16, 1917.

ately leads one to think of the intestinal tract because it is the normal habitat of those organisms. Approximately this same proportion pertains to the pyelitis of infancy—a not insignificant point considering the relation between infant pyelitis and a focal infection which is usually found in the intestinal tract.

The literature dealing with chronic pyelitis was thoroughly reviewed and particular search was made for evidence supporting the suspicion that such infections were secondary to some focal source of infection. As has been said, many authors including Keyes, Crabtree and Cabot strongly suspect such a relation. There have been very few cases reported, however, in which the relation was at all clear.

Pearse¹⁵ reports a case of chronic colon bacillus pyelitis which was relieved by the removal of gallstones and drainage of the infected gall bladder. McGowan¹⁶ reports having seen several women who suffered a chronic urinary infection associated with fecal impaction, the urinary infection decreasing when the bowels were evacuated only to recur with the impaction. Cunningham¹⁷ reported a case of chronic right sided pyelitis associated with a chronic otitis media. Nice¹⁸ reported two patients relieved of a chronic urinary infection, one by the removal of badly infected tonsils and the other by the removal of abscessed teeth. Reisman and Muller¹⁹ reported a case of chronic *Bacillus Friedlander* pyelitis associated with a bronchitis. Canlk²¹ reports having studied thirty-one cases of chronic pyelitis of which fifteen were associated with some focal infection such as tonsillitis, osteomyelitis, and intestinal toxemia. These few cases, of course, can not be taken as any conclusive evidence that chronic infections of the kidney pelvis are secondary to a focal infection but they add their bit to the suspicion.

In reviewing the cases examined and treated at the Brady building those were excluded whose record did not show conclusive evidence against the possibility of some predisposing anatomical or pathological condition of the kidney or its pelvis. In the study of the cases of simple pyelitis particular attention was paid the presence of a history of any chronic condition which might have been a focus of infection whence came the organisms infecting the kidney pelvis. It must be remembered that at the time of examination of these patients their histories were taken without the least sus-

picion that kidney infections might be secondary to some focal infection. Nevertheless, the care and detail with which Brady patients are studied and the complete records that are made of all findings makes a review of these cases very valuable.

Of the thirty-five cases of simple pyelitis sixteen gave record of some other condition which might have been a primary focus of infection and from which organisms might have continually supplied the chronic kidney infection. Of these sixteen cases, ten were associated with some intestinal disturbance such as dysentery, chronic appendicitis, obstipation, and summer diarrhea. It is remarkable that all ten of these cases suffered a bacillary pyelitis. Such an unanimity certainly suggests the possibility that the colon bacilli infecting the kidney pelvis originally came from the intestinal tract.

Of the remaining six cases giving record of some focal condition which might have been the source of the pyelitis, three were bacillary and three were coccal infections. Of the three bacillary infections, one was associated with a severe pyorrhea and tooth abscess, a second followed an attack of La Grippe, and the third was associated with an infected traumatic sinus of the prostatic urethra. Of the coccal infections, one had a chronic discharging otitis media, a second suffered a chronic osteomyelitis following a septicemia, and the third suffered a chronic gonorrhoeal urethritis, the pelvic infection being also gonorrhoeal.

In the entire series of cases there were but three in whom there was a strong probability that the pyelitis was secondary to and dependent upon a focal source of infection.

One patient suffered a bilateral staphylococcal and colon bacillus pyelitis dating back three months to a second attack of appendicitis. Thruout the course of the kidney infection the patient noticed that the backache and cloudiness of urine varied accurately with the degree of constipation and the soreness over the appendix. It seems that there can be little doubt of a relation between the pyelitis and the chronic appendicitis in this patient.

One patient suffered a bilateral staphylococcal pyelitis of four years' duration associated with a chronic discharging otitis media. During the course of treatment at the Brady building there was a period in which the urine was free from organisms but the infection returned and remained. It would have been very interesting to have seen

the result that a cure of the otitis would have had upon the kidney infection. The mere fact that the pyelitis returned after having been once cured by lavages is evidence that the ureters were reinfected by organisms reaching the urine from some focus in the body.

One patient suffered a bilateral colon bacillus pyelitis dating back twenty years to an injury of the deep urethra. His entire treatment at the Brady building consisted of eighteen pelvic lavages. There was no improvement in his condition until, near the end of his stay, a traumatic pocket was found in the prostatic urethra from which pus was seen to escape. Following the cure of the infected pocket by direct applications of a solution of nitrate of silver, the pyelitis reacted to the lavages. The fact that the urinary symptoms dated back to the injury of the deep urethra, together with the fact that the pyelitis was refractory to treatment until the infected pocket was cured seems to prove the relation of the pyelitis to the focus of infection in the urethra.

In the study of these thirty-five cases of chronic non-surgical pyelitis, chronic infection of the prostate and seminal vesicles was not considered a possible focus of infection because of the prevalent belief that such a condition occurs as a result of the infected urine coming from the ureters. There certainly can be no doubt that a chronic urinary infection caused by a chronic pyelitis can, and sometimes does, result in infection of the prostate and seminal vesicles, particularly if their local resistance has been decreased by some previous inflammation. On the other hand there seems to be some evidence that a chronic prostatitis and seminal vesiculitis may sometimes cause and keep up a pyelitis.

Six of the cases of chronic pyelitis associated with a chronic prostatitis and seminal vesiculitis were cured of the pyelitis but not of the bladder infection. In all six cases the pyelitis recurred. There is certainly grounds for the suspicion that in these cases the chronic infection of the prostate and seminal vesicles was the source of the organisms that produced the reinfection of the kidney pelvis. One of these cases had an infected bladder urine for four months before the ureteral infection occurred while a second was treated for a verumontanitis and prostatitis for a period of two months, before the ureters became infected. In these two cases it seems probable that the infection at the neck of the bladder not only caused the recurrence

of the cured pyelitis but was the original source of the infection.

About one-third of the cases of chronic pyelitis are cured very easily and do not show any tendency toward recurrence. If we assume that pelvic infections are secondary to a focal infection elsewhere in the body these cases that are cured so easily can be explained only upon the theory that the focal infection was transient and that consequently there was not a constant play of new organisms over the mucous membrane of the cured kidney pelvis. It is surprising how accurately the findings of the Brady cases conform to this theory. It was found that of the twelve cases cured by one, two, or three lavages only two were among those giving histories of some condition that might have been considered a possible focus of infection. Fourteen of the sixteen cases giving a history of some possible focal condition were among those requiring over three treatments.

Because of the possibility that some of the cases of chronic pyelitis are secondary to and dependent upon a focal source of infection elsewhere in the body, the treatment of infections of the pelvis of the kidney should be expanded to include a search for and, if found, the treatment of such a focus.

The majority of cases of chronic non-surgical pyelitis is caused by bacilli of the colon group. Many cases of colon bacillus pyelitis are associated with some intestinal disturbance. Because of these two facts it is imperative that a search be made for any abnormal intestinal condition in a patient suffering a chronic colon pyelitis. If such be found it should be remedied. If any condition such as carious teeth, dental abscess, chronic otitis media, furunculosis and other chronic focal infections be found they should be treated in conjunction with the pelvic lavages. If there is a coexisting infection of the prostate and seminal vesicles, it should be treated in conjunction with the pyelitis.

The local treatment of chronic pyelitis consists of repeated direct applications of some irritant antiseptic to the inflamed kidney pelvis. Silver nitrate has been given the preference because it is both irritating and antiseptic. The lavages should be repeated at intervals of a week or ten days until the ureteral urines have been found to be free from organisms. The injection should be of one per cent strength at the first sitting and, unless it be followed by a severe reaction, a two per cent solution should be used the second time.

Subjects differ in their susceptibility to nitrate of silver just as to other drugs. Because of this it is best to increase the strength of solution at each sitting until one has been used which produces an annoying but bearable amount of renal discomfort for a day following the lavage. Some patients can not take a solution stronger than one per cent. Others will not experience a reaction until a five per cent solution has been used. Of the cases treated at the Brady building, four were not benefited until a five per cent solution was used. One patient received six lavages with a one per cent solution without benefit but was cured by a single injection of a five per cent solution producing a moderate reaction. Regardless of the strength solution used, the amount should not exceed six or eight cubic centimeters and upon the slightest complaint of kidney pain the injection should be at once stopped.

The use of hexamethylenamin and other urinary antiseptics has not met with the success anticipated. True it is that when given every four hours, hexamethylenamin will produce a marked decrease in the number of organisms found in the bladder urine. Such a result, however, is probably attributable to the inhibitory action exerted against the multiplication of the bacteria in the bladder rather than a decrease in the number of organisms present in the infected ureter.

Because of its value in inhibiting the multiplication of organisms in the bladder urine, hexamethylenamin is used as an adjunct in the catheterization treatment of chronic pyelitis. To be of any value, the urine must be rendered acid. It is just as important that the drug be given in massive doses and regularly every four hours.

CONCLUSIONS.

First: There is apparently some relation between the chronic infections of the kidney pelvis and a focal infection elsewhere in the body—usually some intestinal disturbance; less frequently an infection of the middle ear, the tonsils, or teeth.

Second: Chronic infections of the prostate and seminal vesicles are occasionally the source of organisms producing and supporting a chronic pyelitis.

Third: In the treatment of chronic pyelitis a focal source of infection should be sought and if found treated.

Fourth: In the local treatment of chronic pye-

litis, the solution of silver nitrate should be used in sufficient strength to produce an annoying but bearable amount of renal discomfort.

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AMBULATORY AUTOMATISM.*

BY HERBERT W. POWERS, M. D.,

MILWAUKEE.

By ambulatory automatism is meant "a pathological syndrome appearing in the form of intermittent attacks, during which the patient leaves his home and makes an excursion or journey, justified by no reasonable motive. The attack ended, the subject unexpectedly finds himself on an unknown road or in a strange town."

This definition given by Pitre, perhaps most nearly defines the condition which forms the title of this paper. In the literature the condition is written of under the synonyms: Fugues, flights, automatism and vigil ambulism.

During the appearance of such a state the patient may not act exactly like himself, but usually there is nothing obviously pathological in his conduct, and on returning to normal consciousness no knowledge remains of what transpired during the ambulatory period.

Apparently this syndrome arises as a symptom of various maladies quite diverse in their causation, especially as evidences of post-traumatic, post-epileptic, alcoholic and hysterical conditions.

The symptom Ambulatory Automatism is not to be confused with the peculiar flights of the insane such as not infrequently occur in general paresis, senile, or precocious dementia, paranoid states and the like with more or less altered states of consciousness.

Nor is it to be confused with the restless migration from place to place of the constitutional neuropathic individual who, more or less unstable and defective, is unable to establish and maintain a continued interest in one environment or occupation. Such individuals may with best intention apparently settle for good, but some sudden impulse based upon any of the usual causes for change, such as resentment against employers, weariness of occupation, in short, any of the ordinary motives of travel or removal, but not sufficient in degree to move a normal individual, will cause them to give up their employment and move on.

Many times such patients, that is, the constitutional neuropaths, are themselves scarcely able to recognize the motive underlying the impulse to move from place to place.

Some persons are seized at irregular intervals with a feeling of unrest and discontent, such periodic fluctuation of spirits may reach a marked pathologic degree and Kraepelin and others have considered these conditions related to epilepsy and dipsomania, while Tissie and others have laid great stress on dreams as a causative agent in impulsions to flights.

Between these various groups of conscious errants and the ambulatory automaton there is some sort of relationship. The same individual may be at times a conscious and at other times an unconscious wanderer. Such a disposition or habit of mind plus some slight alteration of consciousness would be quite likely to result in ambulatory automatism.

Let me at this period instance one or two cases which have come under my observation: N. W., aged 28, female, unmarried, recently under observation, gave the following history which is not very complete. She was an orphan and some three or four years ago entered a nurses' training school but her period of service lasted only about one year. Just why it was terminated, I could not determine. Since that time had been employed in a hotel in Minneapolis. One day about two weeks previous to the time I saw her she found herself in Red Wing, Minnesota, at a hotel. She denied having any recollection whatever as to how she came there though she was informed that she arrived on a train from Minneapolis and had been taken from the train because she had had an attack of illness of some sort. She had in her possession a railway ticket which had not been collected by the conductor. She at this time was apparently clear and immediately planned to take a train at 1 o'clock for Minneapolis and remembered starting for the station with that end in view. When next she returned to consciousness, she found herself in Milwaukee, having purchased a ticket to this city. Here she entered into the status epilepticus which continued with some severity for several days; and, at intervals following epileptic attacks she manifested the psychosis described as epileptic furor and at other times was in an altered state of consciousness during which, if not confined, she might very easily have made further flights. While in this altered state of consciousness she would easily have passed current among superficial observers. This then is an instance of ambulatory automatism due to epilepsy.

*Read before the Milwaukee Medical Society.

Let me now cite the case of G. G. G., aged 38, male, occupation traveling salesman, and in whose previous history the only thing of moment is a high degree of nervous instability and two attacks of facial paralysis apparently hysterical in origin. This patient's first attack occurred in 1914. While employed as a traveling salesman, he had been called to the home office for a few days, and at this time he was planning to call upon a certain customer in a nearby town where he expected to secure a large order. In response to a telegram from the customer his employer directed him to make this call immediately. From that moment his memory is blank until a period two days later, when he found himself again at the home office and began to make preparations to call on this customer as his employer had directed. The employer asked him what he was doing and when told by the salesman seemed somewhat mystified and said: Why you have just returned from closing up that contract and turned in the order yesterday. The patient was mystified in turn and asked to see the order, which was shown him, and which was properly made out and signed and in his grip he found the usual carbon copies, etc. He has absolutely no recollection whatever of any instance connected with this trip.

No similar occurrence took place in this man's life until 1917, when leaving down town for home at about 6 o'clock, his memory again became blank and he found himself at 3:30 the next afternoon in bed in a hotel without any idea as to how or why he came there nor as to where he was. Looking about the room he discovered that he was in the Hotel Wisconsin and from the clerk learned that he had registered there at about 9 P. M. the previous evening and had given the clerk for safe keeping an empty pocketbook. In September of the same year and under the same condition, that is, while going home from down town between 6 and 7 o'clock in the evening, he again lapsed into a state of automatism and was walking west on Grand Avenue, when an intimate friend met him and engaged him in conversation. Apparently this friend recognized that he was not in a natural state and took him to his, the friend's, home and put him to bed where he awakened in a natural state the next morning. Three other repetitions of this automatic state have occurred to this individual, in one of which he found himself sleeping on a bench in a park at about 5 o'clock in the

morning. This case illustrates automatism not easy to classify as to cause. I am not able to establish any relation of epilepsy in this instance.

Let me now illustrate a case following trauma. A man, H. G., aged 35, while playing golf, was struck by a golf ball in the occipital region. He was stunned for a few moments but quickly regained consciousness and left the golf course unassisted. He returned to his home and went to business the next day, nothing in his conduct attracted attention at home or in his place of employment, but at 2 o'clock the next afternoon he suddenly returned to a normal state of consciousness and the preceding 24 hours are a complete blank in his life.

Mrs. J. C., Jewish, aged 32, married, no children, had several attacks during which her family observed her to be somewhat different from her normal self. This difference they could only describe as consisting of a somewhat dreamy state and during which she was very irritable. Upon one occasion and while in one of these states, her sister's child ran in front of her and she picked up the child and threw it out of the window, which chanced to be a third story window. Following this she was under my observation for some weeks during which she had several attacks of petit mal and one attack of grand mal, thus establishing the diagnosis of epilepsy.

In a study of these cases leading questions are, to what extent are the flights voluntary, to what extent, if at all, are they unconscious, and is the assertion of ignorance on the part of the subject simply a falsehood.

Perhaps an imperceptible gradation might be traced from perfectly conscious voluntary rational (if unwise) flights with perfect memory for all their events to perfectly involuntarily unconscious flights with complete amnesia. Further, the same patient may have conscious as well as automatic flights as have been described by several authors.

It is said by Hermes that if you will make a ring of the white part of the hoof of a mule, and that shall be worn by one that is epileptic, then shall he no more suffer of it.—*Alb. Magnus*.

**IF YOU CAN'T SERVE YOURSELF,
MAKE YOUR MONEY SERVE—BUY A
LIBERTY BOND.**

SKETCHES OF WISCONSIN MEDICAL HISTORY.

BY MAJOR EL. J. BARRETT, M. O. R. C.

SHEBOYGAN.

As our president stated at the annual meeting, the history of a people is the biographies of its leaders, so the history of a state is the record of its highways: Lake Superior, Lake Michigan, Green Bay, the Fox, the Wisconsin and the Mississippi. Is it any wonder our state has a history?

Green Bay, the very name suggests history. Green Bay is two hundred and eighty years old. Green Bay with its traditions is worthy the most careful investigations. The name instantly brings to mind the list of priests and explorers: Nicolet, Allouez, Joliet, LaSalle, Marquette and Hennepin. In 1634 Nicolet stood on the portage between the Fox and the Wisconsin, and believed that the Wisconsin would carry him into the gulf of California.

In the suburbs of the city of Portage stands a granite marker erected by the Daughters of the American Revolution showing the spot where Pere Marquette first embarked on the Wisconsin River. A short distance away on the banks of the Fox River is a National Cemetery and at the forks of the road, on the actual site of old Fort Winnebago, among a group of farm buildings, degraded but still in service, is an old frame house that was once the Post Hospital.

At the junction of the Wisconsin and the Mississippi, the little city of Prairie du Chien has been in the making since 1767—Dr. Brunson, a local historian, disputing an earlier date. It was here that Fort Shelby, named in honor of Kentucky's first Governor, was erected, and over this fort in 1815, Old Glory first floated over Wisconsin. The city was captured by the British the same year and the fort was renamed Fort McKay. A few months later a battalion from Jefferson Barracks, Missouri, drove the British back to Mackinac, rebuilt the fort and named it in honor of President Monroe's Secretary of State, Wm. H. Crawford.

The old fort stood on an eminence overlooking the two rivers. All that is left of it is a little government cemetery containing the graves of some of its former occupants and a mass of stone ruins. The roofless end of a building of what at one time was the hospital, is fast falling to pieces, and the writer on inspecting it last fall requested

the owner to fill the cracks with concrete and check its rapid decay. For a small sum this ruin and a few acres of ground can be purchased and preserved.

At this garrison Lieut. Zachary Taylor, afterwards President, was in command—when Black Hawk ruled the Indians—and the old traditions point to a tree still standing in one of the city streets that Black Hawk climbed to reconnoitre and watch the American troops. To the westward a mile away stands a low stone building built by John Jacob Astor for a fur station.

The word History carries with it the idea of the doings of an ancient race and a chronicle of the lives of a people now dead, and all but forgotten, yet today, yes, right now, we are living in an age where history is being made, not by pamphlets, but by volumes.

"It is a favorite maxim of mine that History, while it should be scientific in its method, should pursue a practical object. That is, it should not only gratify the readers curiosity about the past, but modify his view of the present, and his forecast of the future."—*Seeley*.

Geography made the history of Green Bay, Portage and Prairie du Chien, but every city and county in the State has its medical past. A few years ago an effort was made to establish a small library and rest room for physicians at St. Nicholas Hospital, Sheboygan, to be named the "Clark room," in honor of Dr. Almon Clark, a Civil War surgeon, and one of the dominant characters of Eastern Wisconsin in his time.

Today we are passing through the greatest historic era of all times—even in spite of old Solomon's adjunct, "Let not him that putteth the harness on boast as he that layeth it off."

Never has the profession of Wisconsin been called upon for service and sacrifice as today, service in the greatest cause that ever brought nations to war, service under the Old Flag that has never known defeat. To have been a part of this struggle, to be a part, is the medical history of the State.

Now is the time to preserve these records, to record the fact that good old loyal Pennsylvania, alone of all the States, leads Wisconsin in percentage of physicians furnished the National Government.

That the first shell to kill an American officer in France wounded Lieut. T. D. Smith, M. R. C., Neenah.

No historian can ever record the sacrifices made by the men who have responded to the call to duty in the Great War.

No one can ever enumerate the problems met and conquered by these heroic men.

Families separated, practices lost, life insurance dropped, or carried on borrowed money, for what purpose? For self aggrandizement? No! To save the Republic? Yes!

"Already for each

I see History preparing

A Statute and a Niche."

NOTE—The writer is indebted for historical data to "The Story of the State."—*Legler*.

ABSTRACTS

WOOD ALCOHOL POISONING. A. O. Gettler and A. V. St. GEORGE, New York (*Journal A. M. A.*, Jan. 19, 1918), say that national prohibition will undoubtedly lead to much "moonshining," adulteration and dilution of liquor. This is evident from the recent increase of cases of wood alcohol poisoning, six of them fatal. Such cases, the writers believe, will become still more frequent in the future in spite of rigid measures against adulteration. A warning, they think, is due to physicians, coroners and health officers as to these possibilities. Refined wood alcohol tastes like ethyl alcohol and is considerably cheaper, hence the probability of its use by ignorant dealers in liquor adulteration. The authors report the findings in the six fatal cases. The diagnostic features of acute wood alcohol poisoning are extreme physical weakness, acute gastrointestinal symptoms, blindness, and deep coma ending in collapse and death. In the chronic cases, blindness is the chief feature. A differential diagnosis from epilepsy, and especially from all types of coma, must be made. This is frequently difficult. But we should be suspicious, at least, of wood alcohol poisoning in these cases. To be of any value, treatment must be prompt. It consists essentially of getting rid of the poison in the body, and of supportive measures. The poison is slowly and incompletely oxidized in the system into still more dangerous poisons, namely, formaldehyd and formic acid and as such very slowly eliminated by the kidneys. The stomach should be washed out early and frequently and the washings tested for wood alcohol. Intravenous saline or sodium bicarbonate infusions and phlebotomy and transfusion, if the latter can be had quickly, should be employed. In addition to warmth and strong stimulation with strychnin, digitalis, cafferin, camphor, epinephrin and oxygen must be given. The authors doubt the value of ethyl alcohol to replace the methyl product. For the treatment of the chronic cases they refer the reader to the article by Buller and Wood in *The Journal*, Oct 1, 1904, and that of Birch-Hirschfeld in von Graefe's *Archiv*. The postmortems in four of the fatal cases showed, as

gross appearances, marked cerebral congestion with increased cerebrospinal fluid; also marked visceral congestion and acute pulmonary edema and congestion. In addition, the heart and vessels contained only dark fluid blood. In one of two cases there was pulmonary tuberculosis and in the other, degeneration of the kidneys and liver. A chemical analysis of parts of the brain was made in all six cases and methyl alcohol poisoning found. It is important, the writers say, to note that there is a dangerous common use of refined wood alcohol in the preparation of essences, for flavoring Florida water, witch hazel, etc. They suggest, therefore, suitable legislation for the prohibition of the sale of wood alcohol for domestic uses—measures similar to laws now existing in England and Germany.

WEBER'S SYNDROME. G. B. Hassin, Chicago, (*Journal A. M. A.*, Dec. 29, 1917), defines Weber's syndrome as a complete or partial paralysis of the oculomotor nerve combined with a contralateral hemiplegia. Pathologically it signifies some lesion of the crus cerebri. Its practical value lies in the possibility of precisely locating a brain lesion, since its presence is a sure sign of involvement of a part of the brain—the peduncular region—that thus far has been inaccessible to operative interference. If complete and pronounced, it is confined to that part of the peduncle adjacent to the oculomotor nerve, that is, the inner portion. Otherwise, the nerve may be spared and then the syndrome will be lacking. The few pathologic reports published show that it can be caused by softening, sarcomas and other new growths not identified, hydatid cysts and revolver bullets, but tumors are the most frequent causes. In the modified type of Weber's syndrome, the so-called Benedikt syndrome, the paralyzed side shows a tremor resembling that of paralysis agitans, chorea and athetosis. The writer reports a case in which a glioma was found involving the cornu ammonis. He remarks that a case of this type gives an excellent opportunity for studying the function of the hippocampal region, so as to discover its possible relations to the functions of taste and smell, an investigation which, unfortunately, was not made in this case. The extensive involvement of the neighboring regions, such as the thalamus, the pons, etc., did not show any clinical symptoms exclusively those of a Weber syndrome. Other cases demonstrate that this may be the case if other parts are involved. Yet in his own case, he says, the clinical picture is that of a purely classical Weber syndrome, in spite of the involvement of the tegmentum, when there should have been a Benedikt syndrome. Another remarkable feature of the case was the patient's excellent mental condition, in spite of the fact that a large part of the brain was totally destroyed. This absence of mental symptoms agrees with the observations of others in other cases. When mental symptoms are produced, they could not possibly be ascribed, as d'Astros justly remarks, to the peduncular lesion itself but are due rather to the accompanying cerebral arteritis or to syphilis.

THE WISCONSIN MEDICAL JOURNAL

OFFICIAL PUBLICATION OF THE STATE MEDICAL SOCIETY OF WISCONSIN

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Annual Subscription - - - Two Dollars Single Copies - - - Twenty-five Cents

Address all business communications to THE WISCONSIN MEDICAL JOURNAL, 504 Goldsmith Building, Milwaukee

Vol. XVI.

March, 1918

No. 10

EDITORIALS

PAY YOUR DUES!!

NEVER HAS THE ORGANIZED PROFESSION BEEN CALLED UPON TO ASSUME SUCH RESPONSIBILITIES AS DURING THE PRESENT WORLD CRISIS. IT CALLS FOR TEAM WORK. IT IS YOUR PATRIOTIC DUTY TO SUPPORT YOUR ORGANIZATION AND THEREBY DO YOUR PART. IF YOU HAVE NOT PAID YOUR 1918 DUES, SEND THEM IN AT ONCE.

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HONOR ROLL.

The following societies made the Honor Roll by reporting a full membership by March first:

100% Class.

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Grant Ozaukee
Lincoln Portage
Marinette-Florence Trempealeau-J.-B.

These deserve honorable mention:

75% Class.

- Chippewa Douglas
Columbia Eau Claire
Dane Green
Dodge Jefferson

- Kenosha Sheboygan
La Crosse St. Croix
Langlade Vernon
Manitowoc Washington
Marathon Waukesha
Outagamie Wood

50% Class.

- Ashland-B.-I. La Fayette
Barron-P.-W.-S.-B. Price-Taylor
Brown-Kewaunee Richland
Crawford Rock
Dunn-Pepin Shawano
Green Lake-W.-A. Walworth

Is your Society in the 100% class? If not, are you keeping it out by failure to pay 1918 dues?

THE NEXT STATE MEETING.

THIS is probably a trifle early to call attention to an event scheduled for October, but unless the lines are laid far in advance of our State meeting, we shall not be prepared.

The meeting will be held in Milwaukee during the first week in October. Those who contemplate presenting papers will do well to notify the General Chairman, Dr. A. W. Gray, Wells Building, Milwaukee, or one of the Section Chairmen.

Last year there was a good attendance in spite of the numbers of men who were away in the Government Service. This year, unless the war ends this summer (which is to be fervently hoped), the attendance will be greatly cut. It, therefore, behooves those who are still left at home to make extra efforts to stage a good meeting. A high

standard has been set, so it will take united effort to keep the standard up. May we hope for active co-operation on the part of all the members of the Society for the 1918 meeting.

PROTECTING THE ARMY'S HEALTH.

IN the recent numbers of the Public Health Reports are published the health regulations for the extra-Cantonment Zones. This work is under the supervision of the U. S. Public Health Service co-operating closely with the Army and Local authorities. It is interesting to note the changed attitude on the part of the public since the days of the mobilization for the Spanish-American War.

Conservation of the soldier's health is now accepted as a vital part of the war machine. To keep the fighting personnel to its maximum efficiency is the aim of the Medical and Line Officers, but this can not be accomplished if the soldier on leave, for even a few hours, is in contact with dirt and infection in his pleasures. Already one Mayor (Gill of Seattle) has suffered defeat at the polls because an indignant electorate repudiated him and his stand in regard to conditions in and around Seattle. This was one of the cities where the commanding officer notified the city that unless conditions were bettered, the soldiers would not be permitted to go to town.

In Texas the ice-cream parlors were so insanitary that they were ordered cleaned. The proprietors refused. A guard of soldiers stationed at the street door blocking all entrance of soldiers soon brought proprietors to their senses. Before us is the series of regulations for Camp Dodge, Extra-Cantonment Zone. "Whereas in recent months there has been an alarming increase in the number of persons in the city of Des Moines afflicted with these (venereal) diseases," etc., etc., therefore the cases are to be reported, the brothels cleaned out, the infected hospitalized, etc., and the local health department to co-operate in every way with the U. S. Public Health Service.

At Fort Ogelthorpe, stringent regulations have been drawn up to control the sanitation of barber shops, manicuring parlors, billiard halls, etc. Owners and proprietors of eating houses who comply with the Public Health Service regulations will be furnished a card. Every phase of sanitation is

covered and those proprietors who refuse to clean up their shops and comply with the regulations get no soldier patronage. No penalty is attached to the breaking of the regulations. The card is removed from the window and soldiers pass the place by.

It is certainly gratifying to the people whose relatives are in the camps, as well as to all others at home, to know that the men are well taken care of. Hygiene follows them wherever they go, and will undoubtedly redound to the general good when the boys come back and take up their regular lives again. It is going to be easier to talk health and public health to this generation. Possibly we may find that instead of having to beg for appropriations for public health measures, the money will be presented on silver platters.

War is hell, but out of the hell fire some good things arise. They would come in time, war only intensifies the conditions and jars open the eyes of people.

THE DAM BREAKS.

FOR many years plutocrats of privilege have sat in their castles along the stream secure in the thought that they had successfully held in check the waters by damming them. From their castles they have promulgated their edicts and have browbeaten those not strong enough to refuse to obey arbitrary commands.

For a long time there have been breaks in the dam. Mutterings from outside have reached the ears of the barons, but instead of heeding them, they have become more dominating. The leaks in the dam were patched with further edicts when all the while seeping at the base was going on. Then a typical insurance president barked up the wrong tree; the edict instead of overwhelming the independent thinker only spurred him to put his best effort forward, and behold! the dam crumbles. All the pent up anger, the outraged feelings, the suppressed and smoldering resentment which the medical profession has cherished against the insurance autocrats surge to the surface due to the courage of one man to state in no verbal camouflage exactly what the profession of medicine thinks of the average practices of heads of insurance companies.

The estimable president in Minneapolis could not have foreseen the flood, else he would have couched his original letter in less arrogant and

more conciliatory terms. But he and his kind deserve some verbal castigation. Too long have they lorded it over the medical man. They have taken base advantage of all the psychological factors to whip the doctor into line and make him, as Dr. Brown says, an unpaid clerk of a large money making corporation.

Now that the flood has come, let us not sit idly on the bank and watch the wreckage go by. The dam will be rebuilt stronger unless we dig into the wreckage, drag our rights out, and set them up so firmly that no mere bulls from the thrones can shake them. The dam is broken, fellow members, are you going to be a spectator only or a constructive unit in the repair of the river bed?

VOLUNTEER MEDICAL SERVICE CORPS.

FOR the purpose of completing the mobilization of the entire medical and surgical resources of the country, the Council of National Defense has authorized and directed the organization of a "Volunteer Medical Service Corps," which is aimed to enlist in the general war-winning program all reputable physicians and surgeons who are not eligible to membership in the Medical Officers' Reserve Corps.

It has been recognized always that the medical profession is made up of men whose patriotism is unquestioned and who are eager to serve their country in every way. Slight physical infirmities or the fact that one is beyond the age limit, fifty-five years, or the fact that one is needed for essential public or institutional service, while precluding active work in camp or field or hospital in the war zone, should not prevent these patriotic physicians from close relation with governmental needs at this time.

It was in Philadelphia that the idea of such an organization was first put forward, Dr. William Duffield Robinson having initiated the movement resulting in the formation last summer of the Senior Military Medical Association with Dr. W. W. Keen as president—a society which now has 271 members.

Through the Committee on States Activities of the General Medical Board the matter of forming such a nation-wide organization was taken up last October in Chicago at a meeting attended by delegates from forty-six states and the District of Columbia. This Committee, of which Dr. Edward

Martin and Dr. John D. McLean—both Philadelphians—are respectively chairman and secretary, unanimously endorsed the project. A smaller committee, with Dr. Edward P. Davis, of Philadelphia as chairman, was appointed to draft conditions of membership, the General Medical Board unanimously endorsed the Committee's report, the Executive Committee—including Surgeons General Gorgas of the Army, Braisted of the Navy, and Blue of the Public Health Service—heartily approved and passed it to the Council of National Defense for final action, and the machinery of the new body has been started by the sending of a letter to the State and County Committees urging interest and the enrollment of eligible physicians.

It is intended that this new Corps shall be an instrument able directly to meet such civil and military needs as are not already provided for. The General Medical Board holds it as axiomatic that the health of the people at home must be maintained as efficiently as in times of peace. The medical service in hospitals, medical colleges and laboratories must be up to standard; the demands incident to examination of drafted soldiers, including the reclamation of men rejected because of comparatively slight physical defects; the need of conserving the health of the families and dependents of enlisted men and the preservation of sanitary conditions—all these needs must be fully met in time of war as in time of peace. They must be met in spite of the great and unusual depletion of medical talent due to the demands of field and hospital service.

In fact, and in view of the prospective losses in men with which every community is confronted, the General Medical Board believes that the needs at home should be even better met now than ever. The carrying of this double burden will fall heavily upon the physicians, but the medical fraternity is confident that it will acquit itself fully in this regard, its members accepting the tremendous responsibility in the highest spirit of patriotism. It will mean, doubtless, that much service must be gratuitous, but the medical men can be relied upon to do their share of giving freely, and it is certain that inability to pay a fee will never deny needy persons the attention required.

It is proposed that the services rendered by the Volunteer Medical Service Corps shall be in response to a request from the Surgeon General of the Army, the Surgeon General of the Navy, the

Surgeon General of the Public Health Service, or other duly authorized departments or associations, the general administration of the Corps to be vested in a Central Governing Board, which is to be a committee of the General Medical Board of the Council of National Defense. The State Committee of the Medical Section of the Council of National Defense constitutes the Governing Board in each State.

Conditions of membership are not onerous and are such as any qualified practitioner can readily meet. It is proposed that physicians intending to join shall apply by letter to the Secretary of the Central Governing Board, who will send the applicant a printed form, the filling out of which will permit ready classification according to training and experience. The name and data of applicants will be submitted to an Executive Committee of the State Governing Board, and the final acceptance to membership will be by the national governing body. An appropriate button or badge is to be adopted as official insignia.

The General Medical Board of the Council of National Defense is confident that there will be ready response from the physicians of the country. The Executive Committee of the General Medical Board comprises: Dr. Franklin Martin, Chairman; Dr. F. F. Simpson, Vice-chairman; Dr. William F. Snow, Secretary; Surgeon General Gorgas, U. S. A.; Surgeon General Braisted, U. S. Navy; Surgeon General Rupert Blue, Public Health Service; Dr. Cary T. Grayson; Dr. Charles H. Mayo; Dr. Victor C. Vaughan; Dr. William H. Welch.—*Council of National Defense.*

INCREASED RANK AND AUTHORITY FOR MEDICAL OFFICERS.

THE time has come to make a final effort to impress on Congress the importance of an early and favorable consideration of the Owen and Dyer bills. It is not necessary to recapitulate the fundamental arguments that call for congressional approval of this legislation. However, we must here emphasize that the success of this measure is desired primarily in the interest of the sanitary and health conditions of the Army.

The sanitary service of troops is not an imposition or a necessary evil, as Colonel Ford¹ has pointed out in the introduction to his work on

military hygiene and sanitation, but an effort to assist the commander in preserving the health, and thus the number and morale of his troops. It is an essential and integral part of the military organization. If the sanitary service is to operate to its full efficiency, its advice must be consulted and its orders must be obeyed. "Discipline is essential for the proper enforcement of orders affecting health," says Colonel Ford. "The sanitary adviser can do nothing if his recommendations are not enforced by the commanding officer. Under similar circumstances the morbidity of those commands whose discipline is lax, is invariably higher than is that of those whose discipline is strict. * * In the last analysis, however, responsibility for the health of the command rests upon its commanding officer."

Although it is true that the health of the troops under the administration of our Army today is an indication of the judgment and experience of the commanding officer, the fact remains that if epidemics arise, if there occurs an increased morbidity and mortality among the troops, if anything even remotely affecting the good health of the troops receives publicity, the Medical Department is called to account. The public does not criticize the commanding general or the War Department as a whole; it is the Medical Department which receives the blame and which must appear before the bar of public opinion to justify its work and its ability. Every one knows that the primary purpose of the Army is military efficiency, and that important as are hygiene and sanitation, they must sometimes be ignored. As Ford says, "Military exigencies must dominate before an engagement, during it and perhaps after it." But when troops are in camp undergoing training over long periods of time, as are our troops at present, the medical and sanitary officer should not be in the position of a mere adviser of little rank whose recommendations may be considered by a line officer as the latter's judgment or disposition may indicate. The medical officer should be given rank sufficient to command the wholesome respect and consideration of line officers, and with this rank should be authority to enforce an important order without bias against his future Army life.—*Journal A. M. A., March 2, 1918.*

¹Ford, J. H., Colonel M. C., U. S. Army; *Elements of Field Hygiene and Sanitation*, Philadelphia, P. Blakiston's Son & Co., 1917.

THE STATE MEDICAL SOCIETY OF WISCONSIN

ORGANIZED 1841

Officers 1917-18

G. WINDESHEIM, Kenosha, President
OSCAR LOTZ, Milwaukee, 1st Vice President
T. W. NUZUM, Janesville, 2nd Vice President

CARL DOEGE, 3rd Vice President
ROCK SLEYSSTER, Waupun, Secretary

DANIEL HOPKINSON, Milwaukee
Ass't Secretary
S. S. HALL, Ripon, Treasurer

Councilors

TERM EXPIRES 1923
1st Dist., M. R. Wilkinson Oconomowoc
2nd Dist., G. Windesheim - Kenosha
TERM EXPIRES 1918
3rd Dist., F. T. Nye - Beloit
4th Dist., W. Cunningham - Platteville

TERM EXPIRES 1919
5th Dist., W. F. Zierath - Sheboygan
6th Dist., H. W. Abraham - Appleton
TERM EXPIRES 1920
7th Dist., Edward Evans - LaCrosse
8th Dist., T. J. Redelings - Marinette

TERM EXPIRES 1921
9th Dist., Joseph Smith - Wausau
10th Dist., R. U. Cairns - River Falls
TERM EXPIRES 1922
11th Dist., J. M. Dodd - Ashland
12th Dist., D. J. Hayes - Milwaukee

Delegates to American Medical Association

H. M. BROWN, Milwaukee

ROCK SLEYSSTER, Waupun

C. H. LEMON, Milwaukee

Alternates

W. E. BANNEN, LaCrosse

T. W. NUZUM, Janesville

WILSON CUNNINGHAM, Platteville

Committee on Public Policy and Legislation

EDWARD QUICK, Milwaukee, Chairman

J. P. McMAHON Milwaukee

L. H. PRINCE, Madison

Committee on Medical Defense

G. E. SEAMAN, Milwaukee, Chairman

S. S. HALL, Ripon

A. J. PATEK, Milwaukee

Committee on Health and Public Instruction

SPENCER BEEBE, Sparta

J. M. BEFFEL, Milwaukee

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L. M. WARFIELD, Milwaukee, Chairman
J. S. EVANS, Madison - Secretary

SURGICAL SECTION

EDWARD QUICK, Milwaukee, Chairman
DANIEL HOPKINSON - Milwaukee Secretary

EYE, EAR, NOSE, THROAT SECTION

S. S. HALL, Ripon - Chairman
JOS. BELLIN, Green Bay - Secretary

The Wisconsin Medical Journal, Official Publication

LIST OF EXECUTIVE OFFICERS OF COUNTY MEDICAL SOCIETIES.

Table with 3 columns: County, President, Secretary. Lists medical societies across Wisconsin counties with their respective officers.

SOCIETY PROCEEDINGS**FOX RIVER VALLEY MEDICAL SOCIETY.**

The 30th annual meeting of the Fox River Valley Medical Society was held in Green Bay, Wis., on Feb. 22d.

The scientific program included papers by Dr. J. B. Legnard, Appleton, Wis., Dr. R. M. Carter, Green Bay, Wis., and Dr. Geo. Thompson of Chicago, Ill.

The following officers were elected for the ensuing year: Dr. Victor F. Marshall, Appleton, Wis., President; Dr. Maurice D. Bird, Marinette, Wis., 1st Vice-President; Dr. A. P. Holtz, Seymour, Wis., 2nd Vice-President; Dr. E. G. Nadeau, Green Bay, Wis., Secretary-Treasurer.

The annual banquet was served at the Beaumont Hotel.

MARINETTE-FLORENCE COUNTY.

The officers of the Marinette-Florence County Medical Society for 1918 are: President, Dr. H. F. Schroeder; 1st Vice-President, 1st Lieut. J. W. Boren; 2nd Vice-President, 1st Lieut. R. R. Heim; Secretary and Treasurer, Dr. Luella E. Axtell; Delegate to State Convention, Dr. H. F. Schroeder; Alternate, Dr. E. E. Axtell; Board of Censors, Dr. E. E. Axtell, 3 years; Dr. T. J. Redelings, 2 years; Dr. A. T. Nadeau, 1 year.

The January meeting was an innovation. Being disappointed in the speaker engaged until too late to engage another, a program was hastily arranged consisting of classical articles by prominent men.

NINTH COUNCILOR DISTRICT.

The Ninth Councilor District Medical Society held its mid-winter meeting at Marshfield. Dr. K. W. Doege read a paper on "Diseases of the Umbilicus," and Dr. F. G. Gaenslen of Milwaukee spoke on the "Surgical Treatment of Infantile Paralysis."

OUTAGAMIE COUNTY MEDICAL

The Outagamie County Medical Society held its monthly dinner and meeting at the Appleton Y. M. C. A. on the 26th inst.

A committee of ladies from the Infant Welfare Club outlined a plan for the establishment of an Infant Welfare Station at the City Hall. The society approved of the establishment of such a station and pledges the support of the members.

Doctor E. H. Brooks read an excellent paper on "The Eye in its Relation to Constitutional Diseases" and Doctor Rector made an address on the County Council of Defense, following which the twenty-two members present gladly signed a pledge of Loyalty.

Dr. M. D. Bird presented two papers on Prostatectomy by Dr. Louis E. Schmidt and Dr. Arthur Dean Bevan, introducing the reading with pertinent remarks of his own, especially pertaining to the two-stage operation and his own experience with the class of cases involved.

Dr. E. E. Axtell read a paper written by Dr. J. T. Case of Battle Creek on the Pelvic Colon and Rectum Roentgenologically Considered, and Dr. H. F. Schroeder gave an article from the pen of Dr. Jas. Walsh of Fordheim University on Constipation and Natural Foods.

ROCK COUNTY

The regular meeting of the Rock County Medical Society, held at the Y. M. C. A., Beloit, Wis., was well attended. Dr. Lotz, nationally known tuberculosis expert, spoke on "Recent Advances and Discoveries in the Diagnosis and Treatment of Tuberculosis."

WISCONSIN SURGICAL ASSOCIATION**PRELIMINARY NOTICE.**

The annual meeting of the Wisconsin Surgical Association will be held in Milwaukee on the second Wednesday and Thursday of May, the 8th and 9th.

This will be a combined clinical and literary scientific session. The program committee promises abundance of material and good papers.

The evening of the second day will be spent in a joint session with the Milwaukee County Medical Society.

The Society extends an invitation to members of the State Medical Society to this session. The preliminary program will be published in the next issue of the Journal.

DANIEL HOPKINSON, *Secretary.*

**IF YOU CAN'T SERVE YOURSELF,
MAKE YOUR MONEY SERVE—BUY A
LIBERTY BOND.**

NEWS ITEMS AND PERSONALS.

DR. W. L. JONES of Beaver Dam, has been given First Lieutenantcy in the Officers' Reserve Corps.

DR. JOHN E. BROOKS, Minong, Wis., was appointed First Lieutenant, Medical Reserve Corps.

DR. G. H. CONKLIN, Superior, Wis., received orders to report at Fort Riley.

DR. SCHROEDER of Shawano, Wis., has been appointed First Lieutenant in the Medical Corps of the National Army.

DR. T. D. SMITH of Neenah, Wis., wounded in a German air raid, has returned home.

LIEUT. J. F. BENNETT, M. D., Waterford, Wis., leaves Feb. 16 for Camp Hancock, Augusta, Ga., to act as assistant to the chief of the medical staff of the base hospital.

DR. J. G. HOFFMANN, one of Hartford's leading physicians, has been ordered to report at Fort Riley, Kansas, to undergo training for entrance into the service.

DR. DEXTER H. WITTE, of Waukesha, received orders to report for training at Fort Oglethorpe, Ga., on March 1.

MAJOR GUSTAVUS I. HOGUE is now in charge of Eye Dept., Base Hospital, Camp McClellan, Aniston, Ala.

DR. ROBERT DRANE, who left the University of Wisconsin's staff last spring to become first lieutenant in the medical corps for service abroad, has just been promoted to captain.

Cedarburg, Wis., has furnished a larger percentage of medical officers for the medical corps from its medical population than any other state, excepting Pennsylvania.

DR. HUGH PAYNE GREELEY has removed from Waukesha to Madison, Wisconsin, and is located in the Jackson Block, 112 North Hamilton Street. Practice limited to Internal Medicine.

DR. G. F. KENNEY presented his resignation as health department school inspector to Health Commissioner George C. Ruhland, Wednesday.

MAJ. EDWARD KING of the surgeon general's office in Washington will arrive in Milwaukee next week to look over the ground with the intention of establishing a reclamation hospital and school. It is proposed to establish one of the sixteen hospitals contemplated by the government on the grounds at the Soldier's Home here. Maj. King was invited to come here by the Rotary Club.

DR. S. M. KYES of Clark County, leaves for Fort Riley, Kansas, where he will begin training for service in the medical department of Uncle Sam's army.

DR. J. W. SMITH, formerly of the Emergency Hospital staff, Milwaukee, has been summoned back to Milwaukee to take up duty with the Red Cross Base Hospital No. 22.

DR. HERTZMAN of Ashland, Wis., has received his commission as a captain in the U. S. Army.

DR. B. E. SCOTT of Berlin, Wis., has received his commission and is to report at Camp Zachary Taylor, Louisville, Ky.

DR. G. H. SCHLESSELMAN of Fond du Lac, received orders to report for duty at Chicago, where he will take a course of instruction in Orthopaedic Surgery.

DR. JOHN A. FROELICH, who has practiced medicine at Princeton, Wis., for a number of years, has sold his practice there and moved to Rochester, Minn., where he is one of the staff in the Mayo Brothers' Hospital.

The Milwaukee County Civil Service Commission will hold the following examinations:

Examination No. 1—Resident Dentist, to be held on March 20, 1918, at 9:30 A. M., at the office of the commission, 5th floor of the Pereles building, Oneida and East Water Streets.

Examination No. 2—Resident Physician, to be held on March 21, 1918, at 9:30 A. M., at the office of the commission, 5th floor of the Pereles building, Oneida and East Water Streets.

Examination No. 3—Senior Resident Physician, to be held March 21, at the office of the commission, 5th floor of the Pereles building, Oneida and East Water Streets.

Two talks on war subjects were on the program of the Eau Claire County Medical Society at its monthly meeting Monday night at the Galloway Hotel.

Milwaukee is the seventh healthiest community in the country.

Isolation hospital No. 2 has been opened in the old Harding building on Lake Ave.

At a meeting of the county board of supervisors Wednesday afternoon, a report will be received from the committee that was appointed last week to inquire into public opinion concerning the proposed plan for erecting a new county hospital in the city.

The Milwaukee base hospital unit soon will be on its way to France. "It is an organization that Milwaukee can be enormously proud of," said Dr. H. M. Brown, toastmaster at the banquet given by the Milwaukee Medical Society to the thirty-odd members of the unit.

There are to be no public funerals for meningitis victims.

Doctors who fail to quarantine are to be prosecuted.

All children in Wisconsin under 6 years of age will be weighed and measured within sixty days beginning April 6. The work will be conducted by the child welfare committee of the woman's committee state council defense.

Reorganization of the local medical advisory boards by the appointment of six additional physicians to each unit is now under way.

Maj. Gen. Gorgas reports 1,050 officers have been discharged from Medical Corps for various reasons.

Anti-vivisectionists condemn serums' use. Serum inoculations are responsible for death and disease among soldiers at army cantonments, according to a telegram sent to Senator George F. Chamberlain by the Anti-vivisection Federation.

Racine will open a new Isolation Hospital at 320 Lake Ave.

At the next meeting of the board of regents of the University of Wisconsin, plans for the new infirmary, the Bradley research hospital and the new clinic will, it is understood, be discussed.

The State hospitals are in need of 160 pupil nurses before June 1, 1918.

The hospital flood at Beloit will reach \$3,500.

Beloit checks danger of smallpox by vaccinating all school children.

One hundred thousand out of every 1,000,000 soldiers sent over seas will return to the United States during the first year of fighting, and 20,000 of these will need some kind of vocational re-education or rehabilitation, is the estimate made by

the Federal Board of Vocational Education in a report just published as Senate Document 166.

A comprehensive Federal system for the re-education and placement in wage-earning occupations of every disabled soldier and sailor is presented by the Federal board. This plan involved a central administrative agency at Washington, the coordination with that agency of every Federal and State agency concerned and with similar public, semi-public and private agencies, the establishment of "curative workshops" for the treatment of war cripples, together with a complete system providing for subsistence and pay during the period of re-education.

Dr. Richard Dewey of Wauwatosa has written the words and music of a new patriotic anthem, "The Starry Flag," which he has dedicated to Base Hospital Unit No. 22. The words follow.

THE STARRY FLAG.

(1917)

Oh, Starry Flag, now bravely borne
Afar across the sea;
The stars of heaven, the winds of morn
Are meeting, greeting thee;
Bright emblem of good-will to men,
Of Union free and strong,
Thy pow'r is as the pow'r of ten
To fight and right the wrong.

My native land, my heart's true home,
In this thy hour of need,
Hear, while I pledge before thy shrine
My life, my word, my deed,
All I possess thou gavest me,
So gen'rous thy great heart,
My all were little in return,
But let me do my part.

For thee I'll sail the stormiest sea,
Or gladly toil on shore;
So I may prove my love to thee
I'll delve or serve or soar—
Then, stars of glory still shine on
While men rejoice in light,
Till all the nations learn at last
That right alone makes might.

CORRECTION.

Dr. Nelson M. Black is with the Government Service, but Dr. Black's office is open, and Dr. Chapman, Dr. Black's partner, is taking care of the practice until such time as Dr. Black returns.

The impression might have been left that Dr. Black's office was closed. This, however, is not the case.

DR. LEVINGS IS DEAD!

FROM A FORMER PUPIL.

Somehow, as I recall his forceful, virile personality, I am unable to reconcile myself with the thought that he too has passed away, is no longer with us!

Is it possible, that he who—it seems but yesterday—stood before us and expanded the principles of surgery with such emphasis and force—is now lifeless dust?

Has his gentle nature, his warm sympathy, which he would conceal beneath a show of gruffness—has it proved of no claim?

Beloved teacher! Not many, perhaps, will see in his end the passing of a great man. But to us, his former pupils, his departure is the last of our great man!

May his memory guide us and encourage us in better, nobler work.

ISADORE FRANKLIN,
Wis. Col. Phys. & Surg., '11.

REMOVALS

Dr. Hugh Payne Greeley has removed from Waukesha to Madison, Wisconsin, and is located in the Jackson Block, 112 North Hamilton Street. Practice limited to Internal Medicine.

DEATHS.

Dr. A. H. Levings of Milwaukee, died March 4, after an illness of some months, of cancer of the stomach. He was born August 24, 1848, on a farm near Rockford, Ill. In 1872, he graduated from the medical department of the Northwestern University of Chicago, and began the practice of medicine at Janesville. From there he moved to Appleton, serving several terms as mayor of Appleton. In 1891, he moved to Milwaukee, and with a group of physicians organized the Wisconsin college of Physicians and Surgeons.

Dr. Martin Oyen died Dec. 28, 1917, at East Ellsworth, Wis., of pneumonia.

Dr. Joseph F. Gill, a native of Dane County and for the past 22 years a practicing physician of Madison, died Sunday morning at his home, aged 59 years. He was born on a farm in the town of

Fitchburg, December 3, 1859. He attended the Madison schools and then entered Rush Medical College in Chicago, from which he graduated in 1886. Before coming to Madison he practiced medicine at Barneveld and Masomanie.

Dr. William J. Cronyn died Feb. 28, after an illness of three weeks. Dr. Cronyn came to Milwaukee in 1884, and has been prominent in patriotic work. He was an assistant surgeon in the United States navy, and has been examining physician for pensions in Milwaukee for many years. He was an instructor at the Marquette Medical college. Dr. Cronyn was born in Canada in 1848. Before coming to Milwaukee he was editor of a newspaper at Dunkirk, N. Y.

Dr. John Binnie of Poynette died. He was a native of Sterlingshire, Lauriston Township of Scotland, and was born September 16, 1844. He came to America in 1851 and settled at McComb, Ill. In 1861, the family moved to Caledonia, a few miles west of Portage. Dr. Binnie started the study of medicine in the offices of Dr. Waterhouse in Portage. He entered Rush Medical College in 1868 and graduated in 1875.

Dr. Charles R. Gough, who practiced his profession in Wausau for the last eighteen months, died February 10, at St. Mary's Hospital, Wausau, where he had been for several weeks for treatment. The deceased was born July 26, 1886, at Sugarbush. He graduated from the medical department of Marquette university, Milwaukee, in 1915, and after serving as an interne in a Chicago hospital for over a year came to Wausau.

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CORRESPONDENCE

THE INSURANCE COMPANIES AND THE DOCTOR.

A FURTHER COMMUNICATION.

The enthusiastic expressions of approval that have been received by me, not only from over an hundred of my fellow practitioners in this city, but also by those conveyed to me by letters from all over the State, in regard to my position relating to the attitude of the Insurance Companies toward the Profession, in the matter of making reports for the benefit of the Companies in casualty and other cases, warrants me in publishing the balance of the correspondence upon that

subject, the earlier part of which was given in the February edition of this JOURNAL.

It will be seen that the gentleman at the head of the Insurance Company at Minneapolis, acknowledges his error, while he makes a feeble effort to be sarcastic, and thus to save his face. The main point for gratification is that he admits that he "saw the light" some years ago, and then advocated before a gathering of casualty underwriters, the very things that I have claimed in my previous letter.

The Medical Profession as a body has too long been subservient to the demands of the Insurance Companies, and it requires but a concerted effort on its part to bring about such reforms as will remove this "Old man of the Sea" from its shoulders.

The manager of one of the largest local agencies for the sale of Insurance, has admitted to me that my position is absolutely just, and that he believes that reforms such as I have indicated in my letter, would establish harmony between the Medical men and the Insurance Companies, as well as save many thousands of dollars to the Companies. There are, I am informed, several hundred thousand casualties occurring in the United States, annually, that call for adjustment. If the medical men were paid, as they should be, a nominal fee, say two dollars for each of these reports, by the Insurance Companies,—who should pay—there would be added to the income of the physicians an aggregate of well on to a million dollars, and better than that, there would be established a much better atmosphere of agreement and willingness to serve, between them and the physicians. "A consummation devoutly to be wished." But this gratuitous making of reports by the physicians for the benefit of the insurance companies, is only one of the grievances that the profession has against the insurance men. There are others equally important, as between the Life Companies and the Medical Profession. These may be considered later. Indeed my correspondence with the Minneapolis autocrats, has brought questions from men representing the Life Companies, in regard to making out reports, that are equally of importance both to the companies and to the physicians. It would seem that these letters have been a spark that has served as the origin of what may be a great fire. Let us all join in a reasonable effort to establish our too long neglected right to be suitably paid,—as are men in other professions,—for our knowledge, experience and labor.

H. M. BROWN.

OFFICES OF THE NORTH AMERICAN LIFE AND CASUALTY CO.

Minneapolis, Minn.
January
18th
1918

Horace M. Brown, M. D.,
Milwaukee, Wis.

Dear Sir:

I have for acknowledgment your very lengthy epistle of the 14th inst. The length of it confirms my suspicion

that you might have considerable spare time upon your hands. I am free to say your effort possesses considerable literary merit. I also find myself in hearty accord with some of the things you say. I believe it is a matter of record that I was the first to advocate before the National Association of Casualty Underwriters that some method of compensation be arranged for physicians for making of reports relating to casualty disabilities. The other portions of your letter, however, relating to your opinions and intentions do not interest me in the least.

I really enjoyed your letter immensely. I think it is only fair to express my gratitude for the amusement it afforded me.

Yours very truly,

(Signed) Z. H. AUSTIN,
President.

Milwaukee, Wis., Jan. 19th, 1918.

Mr. Z. H. Austin,
President of the
North American Life and
Casualty Company.

Dear Sir:

I have to thank you for your esteemed letter of the 18th inst.

Yes, I am a man of considerable leisure, or as you put it "spare time", and for that "let the Lord be thankit". After more than forty successful years of the practice of Medicine. I find it a great blessing that the fates have been kind to me, and permit me to enjoy the work of my mind and hands, and the results of my labours, in the years of an hale and hearty old age, and to have leisure to do those things that, as Plato has said, "serve for a pastime for the talents of old age."

I am delighted to find that your confession of a change of heart seems a suitable apology for the character of the first letter you wrote me. Youth was ever impulsive.

Absolvo te sine poenitentia, et cum benedictione Apostolica.

I have the honor to be,

Yours very truly,

(Signed) H. M. BROWN, M. D.

Grand Rapids, Mich., Feb. 26, 1918.

Dr. Horace M. Brown,
301 Iron Block Bldg.,
Milwaukee, Wis.

My Dear Doctor:

Permit me to commend your stand in regard to the North American Life and Casualty Co. as published in the February issue of the Wisconsin Medical Journal.

I have agitated the very same question in Michigan, and personally refuse to make out such certificates unless they are paid for by the Company. I have been successful in causing three or four companies to pay \$1.00 for each certificate that I filled out and also to waive the notary requirement.

I have just taken the liberty of dictating a letter to Mr. Austin and I am enclosing a copy. I do not know

as it will have any influence, but I want to take the opportunity of commending your action and urge that you remain steadfast in the stand you have taken. It is my hope that eventually the doctors will work together and a concerted action will be taken in the matter.

With cordial greetings, I am,

Yours very truly,

F. C. WARNSHUIS,
Secretary-Editor.

Feb. 26, 1918.

Mr. Z. H. Austin, President,
North American Life & Casualty Co.,
Minneapolis, Minn.

Dear Sir:

I was indeed very much interested in reading your exceedingly insinuating and slurring letter addressed to Dr. Horace Brown of Milwaukee in regard to the matter of filling our certificates informing the insurance companies as to the physical condition of their policy holders. I was indeed surprised to learn that the president of an insurance company reputed to be of the standard of your company should reveal such arrogance and ignorance in the matter as you did and attempt to bluff a reputable physician with the statement that a doctor could be compelled to fill out such a certificate by the authorities of Wisconsin, or the State Board of Examiners of Wisconsin, or by the laws of the State. We are truly living in an eventful era and we are becoming somewhat accustomed to unusual events, but your letter is certainly one that is entirely beyond all comprehension. Dr. Brown is absolutely right in the position he takes and his answer to you is a masterpiece that contains many pertinent statements and one can even read further, between the lines.

I have advocated in the State Medical Journal, of which I have the honor of being the Editor, that our doctors absolutely refuse to make these examination certificates—which are wholly and solely for the benefit of insurance corporations and for which they refuse to pay.

It would be just as consistent, if you were connected with a fire insurance company, to write to the fire chief and insist that he make an inspection of a building in order that you might adjust a loss covered by your policy. You know about how far you would get if such a request were made to a city official.

The time is here when executives of insurance companies can no longer coerce physicians into rendering certificates which are solely for their benefit, without remuneration.

In Michigan, were I dealing with your company, I would certainly make it my business to enlighten every policy holder in your company as to your status and position and exercise all the influence I had to cancel the policy and take out a new one with a company that is organized on a different scale. I am thankful that there are such companies in existence and that I have had the same experience as Dr. Brown and have been successful in causing policy holders in such cases to seek protection from more reputable insurance corporations.

I do not know whether you will ever see or be able to perceive the true light. I am, however, sure that persistence in your attitude will soon cause your corporation to be listed among the has-beens.

I shall make it my personal duty, as I travel about the State of Michigan, to ascertain the status of your business and to post our doctors as to the nature of your methods.

Yours truly,

(Signed) F. C. WARNSHUIS.

Stoughton, Wis., Feb. 6, 1918.

Dear Editor:

I see that you have cut out the Nursing Department and I also notice why. Let me tell you your nurse editor was dependent on the good opinion of the Nursing Committee. She, therefore, could not take in anything that could be objected to by them who work not for the hospitals, not for the public, doctors, or the state that gives them their advantages, not even for the sick ones—in their first consideration—but for the registered nurse, and who are proud of preventing forty cities of Wisconsin of 4,000 inhabitants from having hospitals, putting up a minimum of thirty beds as the standard for an accredited hospital—a number of beds that no hospital in a city with less than 6,000 inhabitants could dream of. If your nurse editor had been ordered to call for free discussion, you should have seen the difference in the interest of your Nurse Department. I am one of them who have sent in a paper that was refused, "I would have liked to take it in, etc., but you see my position," and she couldn't take it. It now appears in "The Trained Nurse," Feb. number, under the title of "Our Nursing Laws". There is a sound reaction coming in this matter. The nurse had gone too far already.

Allow me to call your attention to the following points that I draw from the report of the committee of "Standardization of Hospitals" elected by the Surgeons' Congress which report appeared in last November and January numbers of the "Modern Hospital":

"The small semi-public community hospital of the capacity ranging from 5 to 50 beds scheduled as class 5 in our scheme of classification is before us this month for discussion."

"This is one of the most important classes of hospitals that we have to consider. Almost every community of 2,000 people or more, and even towns of a thousand people where there is a considerable rural or semi-rural population dependent on the town can and should have a hospital of some sort * * *."

"The Nursing Service: * * * There is a disposition of the part of some of the states to refuse permission for the hospitals to maintain training schools until they have a certain number of beds * * * It seems to us rather a wrong way to go about the matter and that very much more depends upon the quality of the training that the pupil nurses can get than upon the number of beds in the hospital * * * The limitation in the number of patients ought at least to be compensated for by the better individual training the pupil

nurses can have at the hands of the doctors, under their own superiors * * * .”

“We are to discuss this month small public municipal hospitals as Class 7 of our schedule * * * Many small communities in this country contain as good medical men as are to be found in the large cities. Men who have come from good schools, have served good internships in good hospitals, and constantly keep up the literature of their profession and do good work. * * * .”

“The Training School * * * Hospitals of the class that we are now discussing should have their own training schools. There is no reason why the schools in this class of hospitals should be created or conducted differently than the other classes we already have discussed.”

“If there is no training school, the hospital has to hire graduate nurses to take care of the patients and the salaries for these graduate nurses mount up in the course of the year.” * * * .”

“In all accrediting have one view point, that of the patient, first remembering that the hospital is primarily established for patients.”

The articles from which this has been taken are so very lengthy that it might not be practicable to take in more. Anybody interested may read them in full in the “Trained Nurse”. The trend throughout the articles is to show that the Surgeons’ Congress thinks that the hospital of 5 to 50 beds is absolutely important and should have all the advantages and credit as the large Hospitals.

Respectfully,

M. IVERSEN, M. D.

The following letter is published at the request of the author.

Dodgeville, Wis., March 7th, 1918.

Dr. L. M. Warfield, Editor,
Wisconsin Medical Journal,
79 Wisconsin Street,
Milwaukee, Wis.

Dear Doctor:

In the December number of the Wisconsin Medical Journal you published an article bearing the heading “Outdistancing the Quack.” The article is an unforgivable libel against the Dodgeville General Hospital, a business corporation, and of myself as its medical director. In the same article you assail with equal bitterness Dr. William G. Doern and Dr. Warren B. Hill, both of Milwaukee, who for many years have been recognized in the medical profession as able and reputable physicians.

The result, if not the intention of said article, threatens with destruction the institution, and does me irreparable damage. You later publish a letter from myself to Dr. Doern, and from Dr. Doern to yourselves, as I understand, upon his demand that you correct the injury you had done him.

In seeking to square accounts with him in the article of the January issue you again assail me personally in a note reading as follows:

“Dr. O. W. Joslin of Dodgeville is not a member of the State Medical Society of Wisconsin. He WAS a member. All of the data giving reasons why he is

no longer a member are in the hands of the State Society Officers. Abuse is at times the subtlest form of flattery.—*Editor.*”

I have reason to know that your only knowledge of the situation in the Iowa County Medical Society is from ex parte facts. You have made no inquiry to learn the real facts from myself. You deliberately adopt a course of injustice to me, and seek to do me the double injury of sarcastically and abusively referring to it.

The State Medical Society never professed to investigate the reason for my differences with the group of professionally jealous doctors in Iowa County who assailed me from the first minute I began practice in that county, and who sought by conspiracy to destroy me, as is unfortunately too often the case among the intolerant members of a profession in their attitude towards those who enter a community and dare to challenge their right to a monopoly of the business. My suspension from the State Society followed upon the suspension by the County Society under these conditions by virtue of the articles of organization of the State Society, with no pretext of an inquiry made by the State Society. The suspension is automatic.

You assail us because we have advertised in our local paper, where the stockholders of our General Hospital live; because we advertise the truth; all hospitals and sanitariums advertise; because we are forward-going and courageous in the acceptance of new methods and valuable practice. You assail us because we have taken advanced ground. You do it without investigation and without knowledge. You flippantly use the power of an organization and of a periodical under these conditions to destroy the fruits of a life time of study and labor, and to destroy my career and the success of the institution I represent as medical director.

I ask you to publish this letter, and I demand of you a further retraction of the assault made both upon the institution and myself, or advise you now that we will reluctantly take such legal steps as are necessary to ascertain your right to libel us as you have.

I shall expect prompt reply, or shall assume that none is forthcoming.

Very truly yours,

O. W. JOSLIN, M. D.,

Medical Director.

**IF YOU CAN'T SERVE YOURSELF,
MAKE YOUR MONEY SERVE—BUY A
LIBERTY BOND.**

THE SPLEEN AND ANAEMIA, EXPERIMENTAL AND CLINICAL STUDIES. By Richard Mills Pearee, M. D., Sc. D. Professor of Research Medicine, with the assistance of Edward Bell Krumbhaar, M. D., Ph. D. Assistant Professor of Research Medicine, and Charles Harrison Frazier, M. D., Sc. D. Professor of Clinical Surgery, University of Pennsylvania. Sixteen illustrations, color and black and white. Publishers, J. B. Lippincott Company, Philadelphia and London. Price, \$5.00.

The following are lists of Wisconsin physicians who have been reported on March 1st as being in the Government Service or as having accepted commissions and awaiting call. These lists are necessarily inaccurate and we would greatly appreciate our attention being called to any names which have been omitted or to any names included which should not be. Kindly send corrections to Doctor Rock Sleyster, Secretary, Waupun, Wisconsin.

SERVICE, MAR. 1, 1918.

- Aaron, Joe, Milwaukee
 Adamkewicz, L. L., Milwaukee
 Allen, J. S., Norwalk
 Allen, W. E., Sun Prairie
 Amundson, K. K., Cambridge
 Andrew, C. H., Platteville
 Andrews, C. W., Waupaca
 Andrew, G. F., La Crosse
 Angell, E. D., Milwaukee
 Appln, F. W., Waukesha
 Armitage, J. E., Milwaukee
 Axley, A. A., Butternut
 Bachinski, L. J., Milwaukee
 Bachman, Harold A., Sheboygan
 Baer, C. A., Milwaukee
 Badeaux, G. I., Spooner
 Badling, G. A., Milwaukee
 Baird, J. C., Eau Claire
 Baker, G. R., Tomahawk
 Ballard, J. A., Hayward
 Barnes, Edgar, Ripon
 Barnes, H. T., Pewaukee
 Barrett, E. J., Sheboygan
 Bassler, H. H., Oshkosh
 Bauer, E. F., Milwaukee
 Bedford, E. W., Sheboygan
 Beeson, H. B., Cornell
 Beffel, John M., Milwaukee
 Bellis, G. L., Wauwatosa
 Bennett, J. F., Milwaukee
 Bennett, L. J., Ft. Atkinson
 Bennett, W. C., Rhineland
 Berger, A. J., New Holstein
 Birby, Ellas, Milwaukee
 Birkelo, C. C., Rosholt
 Black, N. M., Milwaukee
 Blanton, S. G., Madison
 Blumenthal, R. W., Milwaukee.
 Boland, J. E., Two Rivers
 Borden, F. R., Plainfield
 Boren, J. W., Marinette
 Bornsteln, Max, Milwaukee
 Bowen, R. L., Oshkosh
 Bowman, Frank F., Madison
 Boyden, W. L., Seymour
 Brewer, L. C., Jefferson
 Brook, J. J., Milwaukee
 Bruins, D., Milwaukee
 Brunckhorst, F. O., Hortonville
 Bryant, J. R., Wausau
 Buckley, Wm. E., Hartford
 Buell, H. A., Prairie Farm
 Burns, H. J., Hudson
 Brown, R. C., Milwaukee
 Cain, C. L., Elmwood
 Campbell, S., Menomonee Falls
 Carter, H. M., Madison
 Christensen, J. W., Sparta
 Christensen, J. W., Westby
 Cristman, E. S., Almena
 Clarke, Chas. P., Janesville
 Clark, C. H., Beloit
 Clarke, T. C., Oconto
 Clark, W. T., Ft. Atkinson
 Clifford, P. M., Green Bay
 Coleman, H. N., Barron
 Combs, C. J., Oshkosh
 Conklin, Geo. H., Superior
 Conley, Jas. G., Darlington
 Conley, J. G., Racine
 Conley, J. M., Oshkosh
 Converse, G. L., Webster
 Cooke, Edward P., Milwaukee
 Cooksey, R. T., Madison
 Cooper, C. A., Norwalk
 Corcoran, C. J., Milwaukee
 Corr, J. T., Racine
 Cottingham, M. D., Lake Geneva
 Cowan, W. F., Stevens Point
 Crane, Martin C., Osseo
 Critchlow, Chas. A., Milwaukee
 Crowe, N. F., Walworth
 Curtin, A. L., Milwaukee
 Cutting, L. D., Stevens Point
 Darby, G. S., Brodhead
 Darling, Frank, Milwaukee
 Dawson, D. L., Rice Lake
 Dean, J. P., Madison
 Decker, C. O., Crandon
 Decker, H. S., Milwaukee
 Dehmel, R. A., S. Germantown
 DelMarcelle, C. C., Neenah
 Dishmaker, D. B., Kewaunee
 Doctor, W. R., Cazenovia
 Dodge, C. H., Clinton
 Donohue, W. E., Manitowoc
 Doolittle, S. W., Lancaster
 Draper, M. H., Deerfield
 Drissel, S. J., Barton
 Drill, Alex. A., Princeton
 Ebert, E. C., Milwaukee
 Eck, Gustave E., Lake Mills
 Egan, Wm. J., Hurley
 Eggers, H. E., Omaha, Nebr.
 Elliott, Reuben J., National Home
 Elliott, R. S., Laona
 Elvis, E. B., Medford
 Erlekson, H. C., Stanley
 Evans, Curtis A., Milwaukee
 Evans, Edward P., S. Milwaukee
 Farnham, C. R., Milwaukee
 Farrage, J., Breckenridge
 Farrell, A. M., Two Rivers
 Federman, E. H., Montello
 Ferguson, F. H., Elroy
 Festerling, E. G., Reedsville
 Fielder, O. A., Sheboygan
 Fitz, E. O., (city not given)
 Fitzgerald, Geo. M., Milwaukee
 Fitzgerald, J. J., Eagle
 Fitzgerald, R. E., Milwaukee
 Flaucher, L. H., Milwaukee
 Fleming, W. J., Wauwatosa
 Foat, John S., Ripon
 Foerster, Harry R., Milwaukee
 Fortner, W. H., Princeton
 Fowler, P. H., Plain
 France, J. J., Milwaukee
 Frew, J. W., Milwaukee
 Frawley, W. J., Appleton
 Fritchen, A. F., Franksville
 Fulton, H. A., Eau Claire
 Flynn, L. H., Eau Claire
 Gendron, A. E., River Falls
 Gilchrist, R. T., Milwaukee
 Gillespie, W. W., Milwaukee
 Gillette, H. E., Packwaukee
 Gillis, J. P., Deerbrook
 Gleason, C. M., Oconomowoc
 Gosin, F. J., Green Bay
 Gosin, D. J., Green Bay
 Gradle, Harry S., Chicago
 Graebner, H. H., Milwaukee
 Grannis, I. V., Menomonic
 Gray, R. H., La Crosse
 Griswold, G. W., Alma Center
 Ground, Holland T., Superior
 Gunderson, C. A. S., Madison
 Hafemeister, E. F., North Prairie
 Hager, F. J., Denmark
 Hall, M. W., Mondovi
 Halsey, H. A., Hiles
 Hanley, W. J., Kenosha
 Hansen, J. W., Milwaukee
 Hansen, Wm. C., Racine
 Hanson, E. W., Three Lakes
 Harrison, Geo. W., Ashland
 Hawley, Franklin M., Bayfield
 Hayes, E. P., Fau Claire
 H'Doubler, F. T., Madison
 Hebron, R. A., Cataract
 Heim, Russell, Marinette
 Heise, Herman A., Madison
 Helm, H. M., Beloit
 Heraty, J. E., Bloomington
 Hickey, R. E., Winchester
 Hitz, H. B., Milwaukee
 Hoffman, J. G., Hartford
 Hogan, J. H., Racine
 Hogue, G. I., Milwaukee
 Holmes, B. H., Delavan
 Howell, E. C., Fennimore
 Hudek, D. F., Statesan
 Huff, F. C., Sturgeon Bay
 Hughes, C. W., Winneconne
 Hughes, John R., Dodgeville
 Huzo, D. G., Oshkosh
 Hunter, C. M., Stetsonville
 Ivy, Robert H., Milwaukee
 Jefferson, H. A., Clintonville
 Jenner, A. G., Milwaukee
 Johnson, J. C., Ogdensburg
 Johnson, W. W., Racine
 Jones, M. L., Wausau
 Jones, W. J., Rockland
 Joseph, W. A., Hancock
 Kampmeier, A. J., Milwaukee.
 Kaysen, Dr., Milwaukee
 Kaysen, Ralph, Watertown
 Keenan, H. A., Stoughton
 Keenan, T. P., Milwaukee
 Kelly, Chas. D., Blair
 Kelly, D. M., Baraboo
 Kennedy, F. H., Greenwood
 Kenney, C. J., Milwaukee
 Kenney, R. L., Milwaukee
 Kerston, E. M., Two Rivers
 King, G. E., Green Bay
 Knox, E. S., Bowler
 Krahn, G. W., Oconto Falls
 Kramer, F. C., Milwaukee
 Kraus, E. T., Sun Prairie
 Kulig, Albert H., Dodge
 Kyes, S. F., Owen
 Kylko, John C., Superior
 Lademann, O. E., Milwaukee
 Larson, G. H., Pewaukee
 Lasche, P. G., Richland Center
 Laughlin, T., Winneconne
 Lawrence, G. H., Fond du Lac
 Leahy, J. D., Milwaukee
 Lewis, S. J., Milwaukee
 Liefert, W. C., Milwaukee
 Lillie, O. R., Milwaukee
 Longley, J. R., Fond du Lac
 Lorenz, W. F., Mendota
 Ludden, H. D., Mineral Point
 Mackedon, T. E., Cedarburg
 Mackoy, Frank W., Milwaukee
 MacLaughlin, H. E., Waupaca
 McBeath, N. E., Livingston
 Maurer, Albert A., La Crosse
 McCarthy, H. C., Richland Center
 McCary, A. J., Green Bay
 McCorn, E. V., Menomonic
 McCromy, J. F., Racine
 McDill, John R., Milwaukee
 McEachern, W. A., Superior
 McGinnis, J. E., Green Bay
 McMahon, F. B., Milwaukee
 McNicholas, Leo T., Athens
 Menefee, B. F., Montgomery City
 Merrill, W. G., Grand Rapids
 Mertens, H. G., Bayfield
 Meyst, Charles H., Burlington
 McGrath, E. F., Appleton
 Midgley, A. E., Whitewater
 Miller, H. C., Whitewater
 Miller, Thomas, Oconomowoc
 Miller, Wilmot P., Milwaukee
 Minahan, P. R., Fond du Lac
 Mitchell, E. J., Brodhead
 Mitten, A. A., Milwaukee
 Mix, H. C., Green Bay
 Moeller, M. W., Milwaukee
 Monstad, J. W., New London
 Moore, L. A., Monroe
 Moore, W. N., Appleton
 Mueller, W. E., Green Bay
 Mulsow, J. W., Two Rivers
 Murphy, Wm. T., Waukesha
 Myers, I. A., Cottage Grove
 Nause, F. A., Sheboygan
 Neilson, G. W., Milwaukee
 Nelson, N. O., Madison
 Nelson, O. A., Park Falls
 Nichols, R. M., Sheboygan Falls
 Nims, C. H., Oshkosh
 Notbohm, D. L. R., Dousman
 Olson, A. L., Stoughton
 O'Brien, H. N., Darien
 Oullette, C. J., Oconto
 Palmer, J. A., Arcadia
 Parker, A. S., Clinton
 Parmenter, E. L., Mondovi
 Partridge, O. F., Mattoon
 Pearson, C. M., Ogema
 Peirce, F. J., Chyenne
 Perry, Gentz, Amery
 Pfeifer, E. C., Loyal
 Phillips, L. J., Weyhauser
 Pinnan, I. B., Excelsior
 Podlasky, H. B., Milwaukee
 Pomainville, F. X., Grand Rapids
 Pope, Frank, Racine
 Pretts, W. W., Platteville
 Prill, J. H., West Salem
 Provost, A. J., Oshkosh
 Pyle, H. J., Zealand
 Randall, A. J., Kenosha

Randall, G. R., Milwaukee
 Reay, G. R., La Crosse
 Rehling, C. F., Fremont
 Remer, Wm. H., Chaseburg
 Richards, C. A., Rhinelander
 Richards, C. W., Reedsburg
 Rilley, Daniel B., Milwaukee
 Roberts, Vernon, National Home
 Robinson, B. N., Prairie du Chien
 Rodecker, R. C., Holcombe
 Rogers, P. F., Milwaukee
 Rollefson, C. J., Superior
 Rose, F., Coleman
 Rowe, L. B., Brodhead
 Rowley, B. B., White Fish Bay
 Rowley, C. C., Winnebago
 Rueth, John Edwin, Sun Prairie
 Ruke, E. A., Boscobel
 Russell, F. H., Neenah
 Rydell, Charles, Superior
 Salbreiter, W. P., Racine
 Sargeant, H. S., Wauwatosa
 Sargent, H. L., Milwaukee
 Saylor, H., Merrill
 Scantleton, J. M., Sparta
 Schaefer, C. O., Racine.
 Schlenker, G. H., Gilman
 Schiek, I. E., Rhinelander
 Schlesselman, G. H., Fond du Lac
 Schneider, J. F., Oshkosh

Schnetz, L. N., Racine
 Schoofs, J. J., Johnsbury
 Schoofs, O. P., Johnsbury
 Schwartz, A. B., Milwaukee
 Schwarz, S. G., Humbird
 Scott, B. E., Berlin
 Scott, J. R., Appleton
 Seaman, G. E., Milwaukee
 Senn, Geo., De Pere
 Senn, Ulrich, Milwaukee
 Sennett, J. F., Milwaukee
 Setheny, H. F., Meunomie
 Shearer, Floyd E., Edgerton
 Sheehan, John R., Milwaukee
 Shmek, A. J., Manitowoc
 Shubert, F., Milwaukee
 Shippy, V. J., Stevens Point
 Simpson, J. E., Endeavor
 Simons, N. S., Taylor
 Sleyster, Rock, Waupun
 Smiley, R. B., Stevens Point
 Smith, Arthur D., Gilmanton
 Smith, Eugene A., Milwaukee
 Smith, John W., Milwaukee
 Smith, S. M. E., Wausau
 Snodgrass, T. J., Janesville
 Spencer, Geo. F., Evansville
 Squires, C. A., Sheboygan
 Stamm, L. P., Milwaukee
 Steenberg, H. S., Milwaukee

Steffen, L. A., Antigo
 Stoland, Iver, Eau Claire
 Taylor, W. A., Portage
 Tharinger, E. L., Milwaukee.
 Thomson, Wm. J., Portage
 Thompson, A. S., Mt. Horeb
 Thompson, F. J., Milwaukee
 Thompson, R. D., Reedsburg
 Towle, Geo. E., Mosinee
 Treichler, M. J., Hancock
 Trobridge, P. T., Washburn
 Trock, M. J., Milwaukee
 Tuxey, Frank S., Boscobel
 Tyvaud, J. C., Whitehall
 Van der Linde, L. A., Wautoma
 Vankirk, F. W., Janesville
 Vogel, Carl C., Elroy
 Watkins, C. W., Oconto
 Wedge, Athol H., Waupun
 Weingart, Wm., Milwaukee
 Wheatley, C. I., Milwaukee
 Whyte, Wm F., Madison
 Wilkensen, John J., Milwaukee
 Wilkinson, M. R., Oconomowoc
 Willett, Thos., West Allis
 Witte, D. H., Hartford.
 Woodhead, F. J., Merton
 Yates, C. A., Bangor
 Yates, J. L., Milwaukee

HOLDING COMMISSIONS—AWAITING CALL

Ainsworth, H., Richland Center
 Andrews, G. F., Birchwood
 Bayer, Wm. H., Gleason
 Beebe, C. M., Sparta
 Bendixen, B. O., Campbellsport
 Bentley, J. E., Portage
 Bird, John N., Stevens Point
 Bolton, E. L., Chilton
 Brazeau, G. N., Racine
 Breeden, R. F., Richland Center
 Brown, G. V. I., Milwaukee
 Brown, C. W., Milwaukee
 Butler, F. E., Menomonee
 Campbell, L. A., Clear Lake
 Chorlog, J. K., Madison
 Dodd, John M., Ashland
 Donnelly, F. J., Nashotah
 Dierschke, P. C., N. Freedom
 Dreyer, Richard A., Wheeler
 Eastman, J. R., Kenosha
 Fitzgerald, Geo. M., Fond du Lac
 Foster, A. M., Racine
 Fowler, J. H., Lancaster
 Gavin, S. E., Fond du Lac
 Gates, Eugene, Two Rivers
 Gobar, F. W., Milwaukee
 Griswold, Chas. M., Alma Center
 Greenberg, Harry, Milwaukee
 Ground, Wm. E., Superior

Harper, C. A., Madison
 Harvie, W. D., Oshkosh
 Hatch, W. E., Superior
 Hecker, Wm., Beloit
 Hendrickson, H., Green Bay
 Hertzman, C. O., Ashland
 Hinrichs, R. G., Ashland
 Kalling, Harold, Black River Falls
 Kauth, P. M., Schlessingerville
 Knapp, Edgar J., Rice Lake
 Lauder, C. E., Viroqua
 Lundmark, L. M., Ladysmith
 Lynch, D. W., West Bend
 McCormick, T. F., Milwaukee
 Mehl, Hugo F., Milwaukee
 Middleton, W. S., Madison
 Murphy, E. R. F., Antigo
 Myers, Herman, New Lisbon
 Moquin, E. I., Fairwater
 Nelson, O. A., Birchwood
 Nott, Geo. W., Racine
 Nuzum, Thos. W., Janesville
 Oates, Frauk, Fond du Lac
 Pember, J. F., Janesville
 Peterson, G. E., Waukesha
 Pfeil, R. C., Thiensville
 Pierson, P. R., Readstown
 Pullen, A. J., N. Fond du Lac
 Puls, A. J., Milwaukee

Quinn, Jos. F., Milwaukee
 Rantz, W. L., Rosholt
 Rice, F. R., Walmouth
 Riley, E. A., Park Falls
 Rogers, E. H., Stevens Point
 Rogers, F. C., Oconomowoc
 Scanlan, P. L., Prairie du Chien
 Scheer, G. H., Sheboygan
 Schultz, F. J., West Allis
 Shinnick, T. F., Beloit
 Shockley, H. O., Darlington
 Staehle, Max, Manitowoc
 Stoddard, C. H., Milwaukee
 Stuesser, C. N., Oconomowoc
 Sylvester, Homer, Montfort
 Taylor, L. L., Waupun
 Thompson, J. B., Wittenberg
 Torpey, T. G., Monocqua
 Townsend, E. H., La Crosse
 Voorus, L. O., Beaver Dam
 Walch, F. C., Black Creek
 Walters, F. A., Stevens Point
 Webb, E. P., Beaver Dam
 Wiesender, A. J., Berlin
 Wilkowski, C. W., Chippewa Falls
 Wilson, R. S., Milwaukee
 Youmans, L. E., Mukwanago

HONORABLY DISCHARGED

Cary, L. W., Winnebago
 Dana, A. C., Fond du Lac
 Dawson, Chas. A., River Falls
 Dougherty, C. F., Richland Center
 Eglund, Gustaf R., Sturgeon Bay
 Epley, O. H., New Richmond
 Ford, Wm. B., Milwaukee

Krygier, A. A., Milwaukee
 Lawhorn, C. C., Milwaukee
 Lochemes, W. T., Milwaukee
 MacLaughlin, Harry E., Waupaca
 Madison, J. D., Milwaukee
 McCormick, Wm. C., Tomahawk
 Miller, D. C., Spencer

Patek, A. J., Milwaukee
 Roberts, D. W., Milwaukee
 Ruhland, G. C., Milwaukee
 Smith, T. D., Neenah
 Sykes, L. G., Milwaukee
 Taylor, J. Gurney, Milwaukee

BOOK REVIEWS

DISEASES OF THE DIGESTIVE ORGANS, with special reference to their DIAGNOSIS AND TREATMENT. By Charles D. Aaron, So. D., M. D., Professor of Gastroenterology in the Detroit College of Medicine and Surgery; Consulting Gastroenterologist to the Harper Hospital; with 156 engravings, 48 roentgenograms and 9 colored plates. Lea & Febiger, Publishers, Philadelphia and New York, 1918. Price, \$7.00.

The second edition of Dr. Aaron's book shows some revision in the text, notably in the increased number of

X-ray plates. Several new chapters have been added, especially in connection with the examination of the Duodenal contents. He also added chapters on Chronic Intestinal Infection and Chronic Intestinal Stasis.

The book contains 782 pages, much of which it seems to us, is useless. However, for those who insist upon having a special book on diseases of the stomach of this size and bulk, this is a perfectly safe book to recommend. We cannot help but feel, however, that the actual diseases of the stomach could be compressed into a volume half the size of this. The illustrations are well reproduced and the book is well gotten up.

THE SURGERY OF ORAL DISEASES AND MALFORMATIONS. Their diagnosis and treatment by George Van Ingen Brown, D. D. S., M. D., C. M., F. A. C. S., Major Medical Officers' Reserve Corps, U. S. Army. Oral Surgeon to St. Mary's Hospital and to the Children's Free Hospital and Columbia Hospital, Milwaukee; Fellow of the American Medical Association; Member of the National Dental Association; Chairman of the Section on Oral Surgery of the Fourth International Dental Congress, etc. Second edition, with 521 engravings and 20 plates, and a selected list of examination questions. Lea & Febiger, Publishers, Philadelphia and New York, 1917. Price, \$7.00.

The second edition of Dr. Brown's book has been somewhat enlarged, and considerable new material has been added. The first part of the book deals in general with all the diseases which occur in and around the mouth, and naturally some of the text is rather brief and somewhat sketchy. The part dealing with the problem of the relationship of the maxillary bones to general diseases is extensively considered. This is the work that the author has been particularly interested in, and to our mind, the most valuable part of his book.

We cannot follow him to the extent in believing that the vegetative nervous system is so profoundly influenced by nasal and mouth deformities. This field is so fascinating and so difficult of experimental proof, that speculation is easily indulged in, and one is apt to be led off into pure theories to explain effects. This tendency is rather wide-spread at present, and has resulted in a great deal of words with very little real knowledge.

Dr. Brown details some very interesting cases, showing the result of widening of the superior maxillae, and there can be no doubt many cases showing irritative symptoms are much benefited by this procedure.

The article on Hairlip and Cleft Palate is masterly, and seems to leave nothing to be desired. This represents the author's own work. In this field he is recognized as an expert. This section is profusely illustrated and the operative technique is very clearly demonstrated.

We note several rather glaring mistakes in the text. On page 483, we feel rather sure that the quotation in regard to Hodgkins' disease is misquoted. The word "protein" probably should be "protean". Also on page 545, U-ray instead of X-ray is printed. These are, however, details which do not amount to much, and certainly do not detract from the value of the book. We confess, however, that we do not like to see the word tubercular used in connection with lesions due to tuberculosis. The adjective is tuberculous. It is unfortunate that so many men who write, use this word incorrectly.

We have enjoyed reviewing this book. The text is very well written in spite of its brevity. The illustrations are numerous and well reproduced, and the colored illustrations are very excellently reproduced.

We know of no book that quite takes the place of this one, and we feel that it should be in the hands of all those who are practicing medicine and surgery. Dr. Brown is to be congratulated upon the excellency of his work.

THE PRACTICAL MEDICINE SERIES. Comprising ten volumes on the Year's progress in Medicine and Surgery under the general editorial charge of Charles L. Mix, A. M., M. D., professor of physical diagnosis in the Northwestern University Medical School.

VOLUME VI. GENERAL MEDICINE. Edited by Frank Billings, M. S., M. D., head of the medical department and dean of the faculty of Rush Medical College, Chicago, assisted by Burrell O. Raulston, A. B., M. D., resident pathologist, Presbyterian Hospital.

VOLUME VII. OBSTETRICS. Edited by Joseph B. DeLee, A. M., M. D., professor of Obstetrics Northwestern University Medical School with the collaboration of Eugene Cary, B. S., M. D., assistant gynecologist, St. Luke's Hospital; instructor in gynecology, Northwestern University Medical School.

VOLUME VIII. PHARMACOLOGY AND THERAPEUTICS. Edited by Bernard Fantus, M. S., M. D., associate professor of Medicine, subdepartment of therapeutics, Rush Medical College, Chicago, Ill. PREVENTIVE MEDICINE. Edited by Wm. A. Evans, M. S., M. D., LL. D., Ph. D., professor of preventive medicine, Northwestern University Medical School, Series 1917. Chicago. The Year Book Publishers. Price of the series of ten volumes \$10.00.

These small handy volumes, Vol. VI, VII, VIII of the series are well worth the practitioner's careful perusal. All the important literature is abstracted, the original sources given. To keep abreast of the rapid strides made in all branches of medicine and surgery we need such manuals to let us know what is being done. The Series deserves a continuous prosperous life.

DISEASES OF THE SKIN: Their Pathology and Treatment. By Milton B. Hartzell, A. M., M. D., LL. D., professor of Dermatology in the University of Pennsylvania. Five colored plates, 242 cuts in the text. J. B. Lippincott Company, Philadelphia and London, 1917. Price, \$7.00.

Hartzell's name is one long known in Dermatology for his frequent and valuable contributions to the periodical literature. As should be expected his text book only adds to his already enviable reputation. The work is profusely illustrated, as any good dermatology must be, and into it have been introduced a large number of first class colored plates, something new in American text books on diseases of the skin. The colored plates, 51 in number are reproduced from Lumieue autochrom photographs and are strikingly true to nature. The book, as the preface sets forth, is intended mainly as a text book for use in medical schools. It is perhaps a little too voluminous for use in the class room when the crowded schedule of our medical courses is considered. It should however be a valuable book of reference for both students and general practitioners and of no small aid to the dermatologist. As in all the recent books on skin diseases the author has given much space to histopathology and the accompanying photomicrographs are unsurpassed. Any adverse criticism must be laid at the door of the publisher rather than the author. The work of the book-binder is very poor to say the least.

R. G. W.

The Wisconsin Medical Journal

Volume XVI

MILWAUKEE, APRIL, 1918

Number 11

ORIGINAL ARTICLES

THE WASSERMANN TEST IN RELATION TO THE DIAGNOSIS AND TREAT- MENT OF SYPHILIS.*

BY O. H. FOERSTER, M. D.,

MILWAUKEE.

The Wassermann test, introduced in 1906 by Wassermann, Neisser and Bruck, is today firmly established as one of the most valuable diagnostic measures in the field of medicine. An enormous number of literary contributions have appeared, covering every phase of the subject, and from the information now available conclusions of value may be drawn. It should be understood at the outset that the Wassermann reaction represents a reaction between lipid substances in the antigen and an antibody-like substance, with an affinity for lipoids, found in the bloodserum of syphilitic persons. It is a highly specific reaction because a similar lipoidophilic antibody is found in only two other diseases, leprosy and frambesia, which can be excluded in the great majority of instances on other grounds. The test is designed for the detection of specific antibodies in the bloodserum, and in its result expresses the relative amounts of the antibodies found to be present. The amount of antibody may be so small as to remain undetected, giving a negative result. In view of this many efforts have been made to increase the delicacy of the reaction and still retain its specific character, by modifications of technic and the use of various tissue extracts as antigens.

The introduction of reenforced or cholesterinized extracts as antigens has considerably increased the delicacy of the test, but these extracts are so extremely sensitive as to be unsafe except in the hands of experienced serologists. It is a distinct advantage to employ several antigens with every serum examined, one acting as a control upon the other.

*Read at the 71st Annual Meeting of the State Medical Society of Wisconsin, Oct. 3-5, 1917.

and allowing greater accuracy in interpretation of the results.

The problem confronting the general practitioner who employs the Wassermann test is essentially one of interpretation of the result as reported to him by the laboratory. He need not understand the intricate details of technic, which is the province of the serologist, but he should be acquainted with the general principles of the reaction, and informed as to the specificity of the method employed. Thus equipped he is in a position to interpret intelligently the laboratory findings in the light of his patient's symptoms and history. The value to be attached to his interpretation will be further enhanced in proportion to his knowledge of the accurate statistics now available relating to the behavior of the test under varying conditions, such as treatment, in the various phases, early and late, of syphilis. It cannot be too emphatically stated that the Wassermann report is not a report upon the patient, but is a statement of what has occurred when the patient's blood serum was tested. As Seelman¹ says: "It must remain for the physician, with a full knowledge of the degree of specificity of the test, to judge the position the findings should command in the clinical history of the case." In spite of the statement that the diagnosis of syphilis should never be made in the laboratory, there are instances of latent syphilis, especially visceral and nervous, and hereditary syphilis, in which the diagnosis cannot be made otherwise. Here the Wassermann test is invaluable, and provides the keystone for the construction of a diagnosis out of otherwise indefinite symptoms. Under such conditions the laboratory evidence must be absolutely conclusive, without any possibility of error.

When we are positive of our clinical diagnosis the Wassermann test is superfluous. Unfortunately the test has its largest percentage of positive findings under the conditions when we least require its assistance. The clinical recognition of the average cutaneous or mucous membrane lesions of syphilis presents no difficulties, and of these cases at least 85 per cent give a positive reaction. If a negative result is obtained in the presence of a lesion

strongly resembling syphilis, it does not follow that the lesion is not due to syphilis. The Wassermann reaction, it should be remembered, is "but one phenomenon of syphilis, not the entire disease" (Heimann²).

Considerable confusion would be avoided, it appears to me, if the serological laboratories would adopt a uniform standard in reporting their results. Complete inhibition of hemolysis is usually recorded as four-plus, and lesser degrees of inhibition are variously represented by three-plus, two-plus, or one-plus. The four-plus result of one laboratory may be the equivalent of the two-plus result of another laboratory equally accurate in its work, but reporting under its individual system. If the physician is acquainted with the system used by the laboratory to which he sends his sera for testing, he can properly interpret the degree of inhibition found. But if the report is later submitted to a second physician, unacquainted with the laboratory's work, serious confusion may result. It appears desirable, therefore, to give the report in percentage of inhibition, as adopted by some laboratories, such as 100 per cent for complete inhibition, 50 per cent, and the like, for lesser degrees, with zero per cent for complete hemolysis, or a negative reaction.

For the intelligent interpretation of the results of the Wassermann test it is essential for the practitioner to know the percentage of positive results that may be expected in the various stages of syphilis. Sufficient data in regard to this are at hand.

In the course of the past ten years it has been established that, in general, the Wassermann reaction is positive in the majority of cases within four weeks after the appearance of the chancre. Craig's³ statistics, from the United States Army laboratory, give "36 per cent positive reactions within the first week after the appearance of the chancre, almost 60 per cent during the second week; almost 70 per cent during the third week; over 77 per cent during the fourth week; and over 80 per cent during the fifth week." The diagnostic value of the test in primary syphilis is obviously great, and especially so when spirochetæ cannot be found in the lesion. A chancre cannot always be recognized clinically, and when the assistance given by a dark-field examination is not available, the Wassermann test must be relied upon in order to arrive at an early diagnosis. When spirochetæ are found and

the Wassermann test is negative, the reaction is more important as a guide to treatment. Under these conditions thorough treatment may abort the disease, and the continuance of a negative result will show that complete sterilization of the infection was secured.

In early syphilis during the period of cutaneous and mucous membrane lesions, a positive reaction is found in practically 100 per cent of cases. Some of these may remain positive indefinitely when untreated; others may gradually become negative even without treatment, after a period of years. In this early stage of the disease a negative reaction is of greater diagnostic significance than at any other period, and repeated negative results rule out syphilis conclusively. I have encountered several instances in which the clinical diagnosis of syphilis was adhered to in spite of negative reactions, when the cases were clearly psoriasis.

During the period of latency about 70 per cent of cases give a positive reaction, but this varies within wide limits and is dependent upon the amount of preceding treatment, the length of time that has elapsed since cessation of treatment, and upon the period of latency, whether early or late. It is in the latent cases especially that keen judgment in interpretation is required. Strong positive reactions in this period are indicative of syphilis even when the history of infection is not obtained. Many of these four-plus reactions are uninfluenced by any form of treatment and remain fixed as such for years without change in the patient's condition. If treatment has been thorough and the reaction nevertheless remains fixed, it appears advisable at present to keep the patient under observation without further treatment. A three-plus or two-plus reaction in latent syphilis is of diagnostic value when suspicious clinical symptoms are present and a history of infection is obtained. A one-plus or plus-minus reaction alone does not justify a diagnosis of syphilis. In patients with a clear history of infection, who have been under treatment, and have previously had a strong reaction, the one-plus reaction is highly suspicious of the continuance of syphilis. A negative reaction in latent syphilis should be considered with due regard for previous treatment; a single negative reaction has no diagnostic value.

In active tertiary syphilis about 75 to 85 per cent of cases give a positive reaction. When the lesions involve the skin a positive finding is con-

clusive. However, in some cases with circumscribed or limited tertiary lesions of the skin, the reaction is negative and cannot be of aid in the diagnosis. I called attention to this class of active untreated tertiary lesions of the skin with a negative Wassermann reaction, in a paper read five years ago, and there emphasized the need of continually exercising clinical control over the Wassermann result so as not to be led astray in diagnosis.⁴

The problem is more complicated when the mucous membranes or internal organs are involved by growths or gummata. In the differentiation of these conditions on the basis of the Wassermann reaction it must be borne in mind that a syphilitic individual may have a carcinoma entirely independent of his syphilitic lesion. Not infrequently syphilis and epithelioma of the tongue or buccal mucous membrane are co-existent and reliance upon a positive reaction for the diagnosis will be disastrous. With due regard for such confusing elements, a strongly positive or even a two-plus reaction in tertiary syphilis is of decided value as a diagnostic aid.

In suspicious lesions of the bones and joints, when the Wassermann reaction is negative, the diagnosis may at times be established with the aid of the roentgenologist, and the therapeutic test is here especially indicated. In congenital syphilis about 95 per cent of positive reactions may be expected in untreated patients.

In addition to its usefulness in diagnosis, the Wassermann test is a valuable guide to the effect of treatment. In the early pre-eruptive period, while the reaction is still negative, prompt treatment may abort the disease. In these cases the subsequent persistence of the negative reaction indicates a cure.

In all cases of syphilis, after the cessation of treatment, the repeated examination of the blood-serum at short intervals is indicated in order to detect a possible reversal of the reaction to positive at the earliest moment. It is generally conceded that the first symptom of relapse is to be found in the blood, sometimes months before clinical symptoms are noted. Treatment may therefore be given before clinical symptoms of relapse have become established and at a time when the infection is more likely to yield to our therapeutic efforts.

In controlling treatment by the Wassermann test in the average patient, we find a gradual change from strongly positive to negative reactions. In

some instances, especially in the late period of latency, as noted above, the reaction becomes fixed and is persistently positive. Under treatment slight degrees of hemolysis may be observed, indicating that the treatment should be continued with vigor. If the result falls short of complete hemolysis and treatment has been adequate, it is advisable to wait for several months as the reaction frequently becomes weaker during this rest period. After four to six months have elapsed, if the reaction is still plus-minus, a provocative salvarsan injection may bring forth a stronger reaction which is an indication for continuance of the treatment. If, however, the reaction is uninfluenced, it is Fordyce's opinion that probably little significance can be attached to it and that it may be disregarded.⁵

When a negative reaction has been obtained after adequate treatment, the test should be repeated every three months for a period of at least one year. If the test remains negative at the end of this time, an intravenous injection of 0.3 or 0.4 gram salvarsan should be given, and the bloodserum obtained on succeeding days for a week should be submitted to the test. This so-called provocative Wassermann test is based upon the observation that a negative Wassermann reaction may be reactivated by an injection of salvarsan and made positive, thereby indicating that the syphilitic infection has not been extinguished. If the provocative test gives a positive result active treatment should be resumed. If the reaction remains negative, the provocative test may be repeated within a year and the patient then discharged.

A most important factor in the proper interpretation of the results of the Wassermann test for diagnosis and especially as a guide in treatment, is the question of antigens. When the amount of antibody in the serum under examination is small, as in old or vigorously treated cases, dependence on a single extract as an antigen may lead to false negative reactions, owing to lack of sensitiveness of this particular antigen. The reaction will be reported as negative, when actually spirochetal activity is still present. This is especially true of the alcoholic extracts of syphilitic liver in common use, as Kolmer and Schamberg⁶ have demonstrated.

In their experience cholesterinized alcoholic extracts of normal heart were found most sensitive, and with allowance for a small margin of error, very reliable. False positive reactions with this antigen rarely occur, and negative reactions exclude

syphilis more definitely than is possible with any other extract (Kolmer). "A weak positive reaction with a cholesterinized antigen and negative with less sensitive antigens should be interpreted according to the history and clinical symptoms of the patient. If the history is suggestive of syphilis the reaction should in the interests of the patient be interpreted as a positive; if the patient is a luetic subject under treatment, further treatment is indicated" (Kolmer). In patients undergoing treatment the Wassermann reaction with cholesterinized extracts will still be positive after the reactions with alcoholic extracts of syphilitic liver and acetone insoluble lipoids have changed to negative. For the control of treatment the cholesterinized antigens are evidently more reliable than other antigens, and in consequence will lead to more thorough treatment.

The Hecht-Weinberg-Gradwohl complement fixation reaction,⁷ which differs in several important particulars from the classical Wassermann method, has recently been adopted by many laboratory workers. This method utilizes the unheated serum and thereby preserves the thermolabile portion of the syphilitic antibody and also takes into account the exact quantity of natural amboceptor and complement present in the serum. The method of Hecht-Gradwohl, it is claimed, obtains 15 to 20 per cent more positive reactions than does the Wassermann test, and usually secures a positive result in cases undergoing treatment after the Wassermann reaction with cholesterinized antigens has become negative. In the borderline reactions, the plus-minus or one-plus reactions of the Wassermann technic, the Hecht-Gradwohl test gives undoubted positive reactions in syphilitic sera, and is negative if the Wassermann reaction is spurious.⁷

When used together the tests serve as a check on each other, as do the different antigens in the Wassermann test. In performing the Hecht-Gradwohl test it is essential at present that the blood be examined within twenty-four hours after withdrawal, owing to the rapid loss of natural complement. However, Gradwohl states that he is developing a method of preserving the natural complement in human serum indefinitely, which will allow of a wider application of the test.

The frequency of involvement of the central nervous system in syphilis did not receive adequate recognition until the serologic examination of the cerebrospinal fluid obtained by lumbar puncture be-

came a routine procedure. With our present knowledge no patient can be regarded as entirely free from his syphilitic infection until both the blood and spinal fluid have been serologically examined and found negative. Reliance upon a negative Wassermann reaction in the bloodserum only, leaves out of consideration the fact that the cerebrospinal fluid may give a positive reaction even when no clinical symptoms are present. In paresis the reaction is positive in both blood and spinal fluid in practically 100 per cent of cases, provided that more than 0.2 c.c. of spinal fluid is used; with 0.2 c.c. the percentage is reduced to 75. In tabes the Wassermann reaction in the blood is positive in 60 to 70 per cent of the cases, and with 1 c.c. of spinal fluid the reaction is positive in 95 per cent, decreasing to 10 or 15 per cent if 0.2 c.c. is used in the test. In tabes the reaction of the spinal fluid is decidedly influenced by the degree of activity of the syphilitic process, varying from strongly positive in early cases to negative in the advanced degenerative forms. In cerebrospinal syphilis the reaction in the blood is positive in 70 to 80 per cent, and with 1 c.c. of spinal fluid in about 100 per cent, decreasing to 10 per cent or less if 0.2 c.c. is used. In the differential diagnosis of these conditions accurate titration of the spinal fluid is required, and the percentage of positive reactions obtained in the bloodserum should receive consideration. In general a positive reaction with 0.2 c.c. of spinal fluid denotes paresis.

The two other aids in diagnosis—the cell count and globulin reaction of the spinal fluid—will not be discussed at this time. There are two sources of error in the Wassermann test which are directly controllable by the physician and which should be more generally understood. It has been shown that the ingestion of alcohol in the form of beer or whiskey, even in small amounts, within 24 hours of the time the blood is taken for the test, often changes a positive into a negative reaction. This negative condition usually is converted to positive again after 24 hours, but may remain for as long as three days. Even strongly positive reactions can be changed to negative, and the practical importance of eliminating this source of error in every instance is obvious.

Another source of error is the production of a false positive reaction in blood serum which has been contaminated during collection. Craig⁸ has shown that staphylococcus albus and aureus and a

short-chain streptococcus, when developing in blood-serum at about 37° C., may produce substances which will cause a positive reaction. Proper attention to asepsis will eliminate this possibility, and rigid aseptic precautions should be taken if the blood is to be kept for 24 hours before the test is made.

Somebody has said that the laboratory should refine diagnosis. It appears to me that in respect to the Wassermann test the tendency in many instances has been to blunt the clinical judgment of the practising physician. Owing to his acceptance of the result of the Wassermann test as an unqualified "yes" or "no," he has gradually come to subordinate his best clinical judgment to the report from the laboratory. However, in the diagnosis of syphilis abundant opportunity still remains for the exercise of diagnostic skill and clinical ability, aided and guided by the intelligent interpretation of the results of the Wassermann test.

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4. Foerster: Journ. of Cutaneous Diseases, Vol. 31, 1913, p. 393.
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DISCUSSION.

DR. J. J. SEELMAN, Milwaukee: Mr. Chairman and Gentlemen: Dr. Foerster is to be congratulated, both on the completeness of his paper and on the completeness of his knowledge of the subject. If every physician had as thorough an appreciation of the value of this test, and understood the interpretation of its findings as well as Dr. Foerster does, the test would be of even far greater service to the profession than it now is.

One of the important points he brought out is the desirability of changing the method of reporting Wassermann tests from the old method of 1, 2, 3 or 4 plus, to giving the results in terms of inhibition of hemolysis. It is not only more correct scientifically but also has certain practical advantages. I might illustrate by citing a case of a man whose blood was sent to me for a Wassermann test about a week ago. The physician wrote that it had been taken from an individual who, about three or four years ago had a Wassermann test made, in which a one-plus positive was returned. This individual has become what we might call a syphilophobe. He has since had eight or ten tests in which the Wassermann was negative, but he still entertains a dread that he might

have syphilis somewhere in his system. The physician stated that if the report came back positive he would move out of town. If that first report had been made in terms of inhibition of hemolysis, say 25 per cent inhibition, it would have meant nothing to the patient, and he would readily have accepted the attending physician's assurance that his case did not justify a diagnosis of syphilis, thus being spared much agony of mind. As a rule a patient insists on seeing the laboratory report, and if it gives a one-plus positive finding it means positive to the patient, even though the physician may be satisfied that so mild a reaction is not sufficient to turn the scale in favor of a positive diagnosis of syphilis in that particular case. On the other hand, as Dr. Foerster has pointed out, the Wassermann reaction is not by any means positive in all cases of syphilis, and though a physician may clinically have satisfied himself that a case is, say cerebrospinal lues, or a syphilitic skin affection, it becomes difficult for him to convince the patient of that fact in the face of a laboratory report which plainly says "negative."

I believe that most of the laboratories are beginning to use more than one antigen. A laboratory that once adopts this system, will soon appreciate the great advantage that comes with the method. Some time ago we adopted the use of three antigens, one of which, the Noguchi, we use with raw serum. It is surprising how much more convincing the tests are to the worker, and how much more valuable the reports to the physician who receives them. For instance, if a serum gives 25 per cent inhibition on the alcoholic extract, 30, 40 or 50 per cent on the cholesterinized antigen and possibly 60 or 75 per cent on the raw serum, the findings are much more conclusive and convincing than if we had only tested it with the alcohol extract and obtained 25 per cent inhibition. On the other hand, if a serum come through negative on all the antigens, the result is also more convincing, and especially is this true in treated cases. If a case of syphilis is treated until a clear and distinct negative is obtained on cholesterinized antigen and on the raw serum, the possibility of a cure having been established in that individual is far greater than if he is treated only until a negative is obtained on the plain alcoholic extract. I believe one reason why so many of our supposedly cured syphilitic cases are coming back to us with positive Wassermanns is because in the past they have, as a rule, been treated only until a negative was obtained on the plain alcoholic extract antigen. If the practice of treating these cases until the serum is negative with cholesterinized antigens and with raw serum were adopted we would have less relapses. Of course, that would mean longer and more thorough treatment.

Referring to the Hecht-Gradwohl test, I want to make a correction. Dr. Foerster said that this modification of the test gives accurately the amount of native amboceptor and native complement present in the serum. This is not correct. In the Hecht-Gradwohl test, or rather the Gradwohl modification of the Hecht-Weinberg method, the hemolytic index is determined, but this gives no information whatever as to the relative amounts of com-

plement and amboceptor present. Given two serums, each with identically the same hemolytic index as determined by the Gradwohl method, one may be rich in complement and the other poor in complement; the former having a small amount of native amboceptor and the latter a large amount. In the test proper both of these serums would be treated alike, though they varied considerably in their complement content, and when we remember that the results of the test depend entirely on the amount of complement present we can easily see that this method is open to a considerable source of error. We have devised in our laboratory and are using a method, which we hope to report in the near future, in which we accurately measure the amount of native complement present in the unheated serum. This is important if we want to achieve the highest possible degree of accuracy; we must know how much complement we are using in our test if we are to get results of any value. The testing of every serum in the raw state is, in my opinion extremely desirable. I have found that not infrequently I get strong, clear-cut, positive Wassermanns, even as high as 100 per cent, on serums that give doubtful reactions in the inactivated state, even with cholesterinized antigens.

In regard to standardizing the Wassermann test, it is a consummation devoutly to be wished, but like so many other desirable consummations, difficult to attain. Laboratory workers are trying to get together to map out some standard method of performing the Wassermann test, and it would be a fine thing if it could be done. However, every worker has his own ideas as to how the test should be performed, and thinks it the only way, and it is, therefore, difficult to get together. The proper thing for each laboratory to do is to incorporate in its report some information as to the methods employed in the conduct of the test, and the interpretations that should be placed on the various findings by those methods.

One thing I wish to bring to your attention which was not touched upon in Dr. Foerster's paper is the making of routine Wassermann tests. Many of the eastern hospitals are making routine Wassermann tests on all cases admitted, and some surprising results have been obtained. The positive findings have been all the way from eight to fifteen per cent. French hospitals report even much higher percentages. If physicians would adopt the practice of making routine Wassermann tests on all difficult and obscure cases they would often be rewarded with reports that would enable them to make correct diagnoses in cases that otherwise remain undiagnosed and unbenefited by treatment. And they would not, as they often are, be discredited when such patients drift to their more modern, up-to-date neighbor who utilizes laboratory aid, makes the proper diagnosis, cures his patients' symptoms and gets credit for doing it.

DR. DANIEL HOPKINSON, Milwaukee: I have enjoyed Dr. Foerster's paper very much. In presenting this subject of the viewpoint of application of the Wassermann test in diagnosis and prognosis, and as a key to the further treatment of syphilis, there are many things about the Wassermann test that even the laboratory man has

not settled as yet. One of the first of these things, and the one that has not been mentioned, is the type of positive serum that a man standardizes his antigen against, the source of error of these slightly positive or negative reactions that are given. We have found that a series of individuals all in a full-blown secondary stage give varying degrees of inhibition. Syphilis is no different than any other infectious disease, so far as the manufacture of protective bodies is concerned, and if this is a protective body that we are measuring, which it probably is, then there is no reason why, in syphilis, as in typhoid fever or any other disease, a very slight amount of antibody may be formed, even in a severe infection, on the one hand, and a very large amount on the other hand. If we take the sera of the first case and titrate our antigen or antigens against this, and then compare it with another set of the secondary case solvent, the first one was what was known as a one-plus or 25 per cent inhibition, and the last was a four-plus. There is a source of error that I do not think is very frequently mentioned. But you can take the same serum and send it to two different laboratories, one of which has a conscientious belief that they have titrated their antigen against a full-blown secondary stage, in which one would expect a large amount of anti body, and still only get a one-plus. That has nothing to do with the individuality of the worker; it has nothing to do with his error or technique; that has to do with the patient suffering from syphilis, and if the errors of the laboratory on the Wassermann were watched as closely on the part of the patient as they are upon the part of the laboratory worker, some of our remarks about these things might be modified.

I would ten times rather report one hundred negatives than one positive that was wrong, because the medical profession knows that at least in those cases where Wassermanns are done frequently, as in the cases Dr. Foerster has mentioned, where the symptoms are obscure or questioned, there are at least 15 per cent of these cases, with even our refined antigens, that are negative. Therefore, when you get a negative report it is not for us to talk to the patient what that means; it is for you to interpret. I do not see any advantage of saying 25, 50, 75 or 100 per cent inhibition, if you do not know what that means. What is the difference? We are not arguing as to what we shall say to the patient; it is what you, as the medical man, shall interpret; it is not our right as laboratory men to tell you even what 50 per cent inhibition means, until we have correlated the work that we have done in the laboratory with your clinical picture. One thing which I would very much like to emphasize is, never let your laboratory man know what serum he is examining; as far as the relation to syphilis is concerned, your man should not know. I do not care who the man is, when he looks at his set of tests, when he has a case where he knows of his own knowledge from the examination of cases of syphilis, or the history you give him, that that is probably a case of syphilis, no matter who he may be, he frequently can not get a one-plus out of his mind, to satisfy you, not to satisfy the patient, and also to satisfy his own glory in saying that he detected

a case of syphilis, when God knows, as Dr. Seelman says, it was a syphlophobia that you or the laboratory man has made, because you knew something about the case. Now these are things which I think we ought to know. And I will say this, that I believe Dr. Seelman is right, that we ought to have two or three antigens if we are going to report that kind of case as syphilis. I believe that a one-plus with alcoholic antigen may mean a great deal to a man who is watching that case. I am not so sanguine about cholesterinized antigen not detecting cases that are not syphilitic. To my own sorrow, several years ago I have reported cases in children and had the family around my neck to find out whether it was he or she had it, and I know neither of them had it, and neither did the child that was examined.

DR. W. C. JONES, Kilbourn: I should like to say a word in regard to two points which are very old and very important. I have had more experience with the Wassermann test in the last couple of years than ever before, because it has been so easy to have Wassermanns made at Mendota, that I have been sending blood specimens a great deal oftener than I used to when it cost \$25 to have one done. A doctor from a neighboring town was in my office some time ago. He is much interested in some records which I showed him in syphilitic cases. There were five chronic cases which I had on hand treating at that time. He said he believed that he was going to start making the Wassermanns. I showed him how simple it was to obtain the blood and send it to the laboratory. He is not an old foggy; he is a man 33 years of age, who has been practising eight years, a graduate from one of our best schools. It was not because he is an old backwood's doctor that he was not having the Wassermann test made. So the first point is to have the Wassermann test made. And the way things are arranged within reach of Mendota there is no reason for any doctor in this part of Wisconsin not having the Wassermann test made. In about 80 per cent of the cases of chronic syphilis I find that I would be mostly in the dark in coming to a diagnosis if it were not for the Wassermann test. And in every single case that does not come out satisfactorily, and about which I am not sure, I have a Wassermann made.

The second point is in relation to negative Wassermanns. I have some very positive cases of syphilis which I am treating, and treating successfully, with negative Wassermanns all the time; I do not know why this is; but I certainly have the history—absolute history, and they respond to the treatment; and yet the Wassermann is negative. So on the strength of a negative Wassermann, do not assume too quickly that the disease in question is not syphilis.

DR. E. A. FLETCHER, Milwaukee: Mr. Chairman and Gentlemen: I think that the proper interpretation of the Wassermann reaction depends upon a knowledge of the general practice of medicine, upon a knowledge of syphilis in particular, and upon a more or less intimate knowledge of the technique employed in making the Wassermann reaction itself. The first two statements

are evidently true and I think need no argument. But that it is necessary to have a more or less intimate knowledge of the technique employed in the Wassermann reaction is not so evident at first sight. I have in my pocket the report of a laboratory which is not at all unlike the reports sent out by many other laboratories. This report says: The Wassermann reaction in this case is positive. There was partial hemolysis in the tube.

Now Wassermann, when he gave us this test, stated certain fundamental principles, which should always be observed in making the test. One of them was that you cannot diagnose syphilis in a tube which has partial hemolysis in it. There must be entire absence of hemolysis in order to make such a diagnosis from the Wassermann reaction alone. In a patient undergoing treatment, where you know that he is syphilitic, the partial hemolysis report is of very great value of course.

Another thing which Wassermann said in regard to his test, was, that the patient should not have had any acute febrile disease for at least a period of one month prior to drawing the blood for the test. It happens every day that patients suffering from acute febrile attacks, have blood drawn for Wassermann reactions and these reactions are absolutely worthless from a diagnostic standpoint.

Much more important than knowing the modification of the Wassermann reaction, which may be used, is knowing the laboratory worker who makes the test. I have a report in my pocket from a laboratory explaining or endeavoring to explain a reaction which the physician questioned. The laboratory worker said, that he had made a mistake in the laboratory, that he had mistaken one blood, which was positive, for another which was negative and in excusing this mistake said that it was not surprising that such an error could occur when it was known that from 50 to 60 tests were made in that laboratory every day. Now I think a report from a laboratory doing this kind of work, is not worth very much.

There are one or two other facts which should be known in regard to the Wassermann test. As Dr. Foerster mentioned in some cases two or three highballs or two or three bottles of beer can render a complete positive reaction, negative, for a period of 24 to 48 hours.

There has been some work done at the Fort Leavenworth prison among the prisoners there living under identical conditions day in and day out and the investigator says that the Wassermann reaction may vary considerably from day to day. For instance, a 100 per cent positive test on a man today may be only 50 per cent positive tomorrow or the day after. I question this very much indeed. This work has never been duplicated and I doubt if it is true, although the article was published in the American Journal of Syphilis some months ago.

In regard to the spinal fluid, lumbar puncture should be done, as Neisser has so emphatically said, on every case of syphilis after it is supposed to have been cured. You will find a great many positive spinal fluids where the blood is negative and where there are very few or possibly no spinal symptoms whatever and I believe that running the test with a quantity of spinal fluid up to

2 c.c. is of very great importance. We frequently find that 1 c.c. of cerebro-spinal fluid will give a negative result and 2 c.c. or less will give an absolutely positive result. Then comes the question of the positive Wasserman reaction in the blood after the man has had three or five grams of Salvarsan and a number of series of intramuscular injections of mercury. McDonagh who has done a great deal of work on syphilis has said, that in a majority of the cases, where the blood has been negative for a period of six months to two years and where the patients have been thoroughly treated they will eventually come back with a 75 or 100 per cent positive blood. The question arises, are these patients syphilitic and should they have further treatment or are they non-syphilitic? McDonagh takes the stand that these patients are non-syphilitic. I, myself, do not believe it. I believe that when proper precautions are observed that every man with a 100 per cent positive reaction is syphilitic. We know that if we get an early chancre before the blood reaction is positive and give the patient vigorous anti-syphilitic treatment for a sufficient time and in sufficient quantity, his blood reaction will never become positive and he can be again infected with syphilis.

And I do not see why a patient who has secondary syphilis, who has had a positive blood reaction and who has had vigorous treatment should be considered non-syphilitic if some months or some years after his treatment has been discontinued, he develops a 10 per cent positive blood reaction.

OUR WAR AIMS—THE PRINCIPLE OF JUSTICE TO ALL PEOPLES.

"An evident principle runs through the whole program I have outlined. It is the principle of justice to all peoples and nationalities, and their right to live on equal terms of liberty and safety with one another, whether they be strong or weak. Unless this principle be made its foundation no part of the structure of international justice can stand. The people of the United States could act upon no other principle; and to the vindication of this principle they are ready to devote their lives, their honor, and everything that they possess. The moral climax of this, the culminating and final war for human liberty, has come, and they are ready to put their own strength, their own highest purpose, their own integrity and devotion to the test."—*From President Wilson's Address, January 8, 1918.*

BOIL IT DOWN.

Have you had a thought that's happy?

Boil it down.

Make it short and crisp and snappy—

Boil it down.

When your mind its gold has minted.

Down the page your pen has sprinted.

If you want your effort printed.

Boil it down.

—*The Survey.*

RECENT PROGRESS IN THE DIAGNOSIS, TREATMENT AND THE PREVENTION OF DEFECTIVE HEARING.*

BY FRANZ PFISTER, M. D.,

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MILWAUKEE.

Have you ever noticed that blind people almost always look contented and often quite happy, particularly so, if their affliction has been with them all their life, whereas the deaf and first of all those who have become so, first in grown up life appear dissatisfied, morbid, suspicious and some even melancholic?

This can be accounted for in the fact that the human being cannot miss the hearing of the human voice nor conversation with human beings very long without being severely disturbed. The prison authorities make use of this fact in their special severe punishment in the form of isolation.

The deaf finds himself isolated from the rest of the world which isolation is only limited by the degree of his affliction, while the blind person enjoys the social relation with those around him. To be in company and not understand, or to misunderstand what is being said or what is going on, seems much harder to endure than to be able to hear and not to see.

The blind do not seem to bother so much about things they can't see, but the deaf person is everlastingly aggravated by what escapes him. It is not at all surprising that he or she becomes suspicious and dissatisfied with life. If we take into consideration the fact that perhaps 70 per cent of all the patients with defective hearing also have to endure subjective or head noises, sometimes of the most aggravating, nerve-wrecking, sleep-preventing kind, we can realize how pitiful is the plight of the patient and how important any promise of relief must be. Not only is it the mental suffering alone we must think of, but also of the deficiency in the earning power, which means much to the community and surely everything to the individual. A deaf person is practically excluded from the learned professions, exceptions notwithstanding. The same holds good with regards to business chances and even in the factory with the recently introduced

*Read before the Eye, Ear, Nose and Throat Section of the Wisconsin State Medical Association, Oct. 4th, 1917.

medical examination his chances for work are very slim. He is limited very much, indeed, in his opportunities to make a living.

A young woman will have difficulty in securing employment even as a hired girl if she is deaf and the matrimonial outlook must be very discouraging to her, indeed.

Much had been done to prevent blindness and in fifty years from now a blind person will be just as rare a thing to see on the street as a pock-marked small-pox victim.

Conditions are not quite so promising with regard to defective hearing for the reason, that unfortunately the public and even some members of the medical profession are not sufficiently awakened to the underlying facts and to their responsibilities. The progressive physicians and the school authorities have done wonderful work to stamp out impaired hearing and deafness, and it is our duty to assist them whenever possible by informing the public that these diseases are **almost always** acquired either in early or in late life and that they are to a large percentage preventable, particularly those acquired in youth; also that there is in most cases such a thing as a cure or at least an improvement with timely and judicious treatment.

Of course, judicious treatment means a correct diagnosis to begin with.

Always keeping in mind the fact, that I am only going to speak of the diagnosis of hard hearing, I will begin by remarking that we are frequently too easily satisfied with the results of a routine examination and in that way misled in our diagnosis, when we ought to know that finer points of distinction are often brought out only after most painstaking labor. For instance, the question of whether the trouble is located either in the sound-conducting or the sound-perceiving apparatus cannot be decided by a positive or a negative Rinne alone, nor with the addition of a Weber test.

It is perhaps not that we need new diagnostic methods as much as it is necessary that we avail ourselves of some of the old ones almost forgotten. Some are very time-consuming and we have difficulty in getting proper pay for such time;—but that is a different question, not to be touched here.

The quantitative examination must follow the qualitative. The upper and the lower tone limits must be established because they are the first to suffer. Tone islands noted with a view of Petzold's law, that b^1 to g^2 must be heard plain enough if

any hearing result is to be expected from treatment or training. It goes without saying, that each ear is to be examined individually.

The noise-apparatus of Barany or someone else is a very welcome addition to our armamentarium, because it completely obliterates hearing in the ear not to be examined, thereby giving hearing in the examined ear alone.

The use of such an apparatus will also bring out cases of double hearing when a different tone is perceived in each ear, a condition very serious in a musician or a singer.

Gellé's test for rigidity of the stapes is valuable. The quality of the sound in our control tube when inflating a Eustachian tube is very instructive. The condition of the Eustachian tube and the surrounding structures have received a great deal of attention of late and with the aid of the various pharyngoscopes we are enabled to detect pathological conditions which have escaped our efforts heretofore.

Bacteriological examinations of nasal or tubal discharge are a help in forming an opinion. The exudate obtained after a paracentesis in a condition of exudative middle ear catarrh is bacteriologically characteristic; bone cells in an ear discharge form an indication for a mastoid operation. Skiagraphy has been employed in many instances with great diagnostic benefit. The history and the drum findings in common with the above mentioned procedures and tests, should make it possible for us to arrive at a diagnosis and a differential diagnosis between the different diseases. Mention must be made of the condition called "Paracusis Willisii" wherein the patient hears best in a noise. This phenomenon, according to Heath and Hayes, indicates a relaxed condition of the ear drum and the structure of the middle ear with the exception of the stapedius muscle, which is kept in a state of irritative contraction by the noise. This fixation of the stirrup accounts for the temporary improvement in the hearing.

With a correct diagnosis of the underlying trouble scientific treatment is possible.

Inflation and ear massage must not be the beginning and the end of our therapeutic measures for they may be even harmful as in a relaxed middle ear or in oto-sclerosis, or in an acute infection.

Inflammatory conditions must be dealt with according to well known principles and the fact for-

ever kept in mind, that the early paracentesis of the ear drum and the early mastoid operation are the procedures that will save the hearing. Granulomata, polyps, or other products of acute or chronic inflammation form an obstruction to sound conduction and proper function and must therefore be removed.

The cases of exudative catarrh have been markedly benefitted by repeated paracentesis if the amount of fluid is at all large and persistent.

Suction at the external ear if gently performed or inflation will empty out the tympanic cavity, to be followed by inflation at regular intervals.

The hypertrophic catarrh is complicated by a corresponding hypertrophy of the Eustachian tube and the adjacent structures in the nasopharynx and the nose, therefore treatment must begin at those locations first if any permanent relief is to be expected. The correction of a deflected septum, the removal of an enlarged inferior turbinate, of adenoid and of polyps have a most decided influence, and if the Eustachian tube is treated systematically and also the middle ear, there should be a good chance of improvement in the hearing.

Mechanical dilatation of the tubes, or treatments with galvanism, or the instillation of solutions such as camphor and menthol and iodine bring results in a goodly number of cases. The instillation of a 5 per cent silvol has proved very satisfactory in some obstinate cases.

For the atrophic middle ear Heath uses Cantharidin solutions, counter irritants, with what he claims good results.

Oto-sclerosis and absolute fixation of the stapes at the oval window present the greatest and most discouraging problem to the successful treatment. Dr. Joseph Beck has used adrenalin injections into the general circulation on the theory, that osteomalacia and chronic osteitis seems to be benefitted thereby. I do not know whether or not he is able to give conclusive opinion in respect to the benefit obtained at this time.

Fibrolysin has disappointed in those cases, as have most other therapeutic agents.

With these last named and the congenital cases or those far advanced by neglect or the nerve deafness of old age we are confronted with a difficult problem. We must not discharge them as incurable and be satisfied at that, but help and assist them to make their burden lighter, to become fairly useful to themselves and to society.

Up to middle age we should advise taking up lip-reading and to those in advanced age recommend some mechanical appliance in hearing. A great many such appliances are on the market and advertised, but very few are any good. Some committee of ear specialists should be entrusted with the task of finding out which are the best ones for the various conditions and publishing the results of their examination in order to protect the public from dishonest advertising quacks.

Some have reported results from the systematic training, from a re-education of the organ of hearing, as it were.

The greatest amount of progress has been made in the giving up of the conservatory measures in the inflammatory diseases of the ear and in the beginning of the realization on part of the public that ear diseases and deficient hearing are only too often the result of neglect.

The family physician, the Health Department, and the school authorities must help us in instructing the people.

That almost all ear troubles attack the human being by way of the nose, the nose having a communication with the ear.

That very few diseases of the ear have come by way of the outer ear.

That a stuffed up nose always means grave danger to the ear and the hearing, because the ear cannot drain naturally and the forced efforts to clear or open the nose must surely bring ear trouble.

That in La Grippe, infectious colds, scarlet fever, measles, etc., it must be the first duty to endeavor to keep the nose open with weak solutions of adrenaline dropped in nose every hour, while patient is lying down, and to stop hard blowing of the same, usually practised by the patient.

That all those so frequently practiced methods of douching the nose are as a rule faulty and that they will contribute to poor hearing.

That all obstructions in the nose and postnasal space, principally adenoids and also enlarged tonsils, must be removed in time, before the damage has been done.

That all shops and factories should be interested in an effort to limit heavy noises or insist on some protection against them.

That all street noises be cut down to the absolutely unavoidable limit.

That parents take the trouble to repeatedly examine each ear of each child as to the distance at

which children can hear the speaking and whispering voice, and

That discharging ears are a severe danger to the life and particularly to the hearing of a grown up person as well as of a child.

That such statements as, "the child is too young" or "it will outgrow it" or "nothing can be done," or attributing deafness to advanced age, on part of those not able to judge are extremely vicious and destined to prevent the elimination of one of the most severe afflictions of mankind.

That young mothers must carefully avoid getting water in the children's ears either in washing or bathing them.

That a greased plug of cotton in the ears is the best protection for the ear while diving or swimming.

DISCUSSION.

DR. F. A. DAVIS, Madison: I have had some little experience with one method mentioned, that is dilating the Eustachian tubes by bougeing, also treating with cantharides-collodium. I saw a number of cases in New York whom Dr. Hayes had treated. He, apparently, had obtained some wonderful results in chronic catarrhal deafness by his treatment. By the cantharides-collodium method I have met with some temporary improvements but not permanent. I think the treatment will have to be carried on for a great length of time. I have had encouraging results with bougeing the Eustachian tubes, I think better than with the old inflation method. It seems to me, if the tube is very narrow, the forceful inflation will do more harm than good. It will force more air in and push on the drum membrane itself, and in these constant treatments you are finally going to wear out the ear drum. I think this can be avoided by the use of the bougies. The method is simple, the chief thing is to learn the anatomy of the nose of each individual. You start with the small wires, with cotton dipped in adrenalin and cocaine; first passing those up through the tube to the middle ear. This is not necessary afterwards. Apparently in the Eustachian tube the lumen is not very sensitive. I find that I can pass the bougies very easily if I cocaine the mouth of the tube. I have had very successful results after six months' application, but I think it takes six months to two years to get a permanent result.

DR. H. B. HITZ, Milwaukee: There is one phase of this thing that might be dwelt upon somewhat to the advantage of all of us, and that is the prevention of deafness. I think Dr. Barth will probably have something to say on this subject, at least from the standpoint of school children. These cases of deafness, particularly of the catarrhal types mostly develop in early life. As a rule they are primarily the result of nasal disturbances of one kind or another. We have had some talk this morning touching the correction of nasal obstructions, and the

putting of the upper air passages into condition to provide proper ventilation. It seems to me, however, that there is one phase of the matter which most of us neglect, and that is the matter of educating the individual, of making the matter clear to him, that the habit of blowing the nose is, generally speaking, a bad habit. We must teach this individual that the more violently he blows his nose, the more liable he is to introduce sepsis into his ear, or produce an over-pressure in the middle ear, which makes trouble. Sooner or later the dilated Eustachian tube is going to contract; so one thing we ought to bear in mind is to settle upon some plan, to be followed out in every case, particularly in the young, for their proper instruction in this matter.

In many of these instances we have no assurance that we have headed off the trouble, but we certainly have an assurance that we are doing the proper thing. I, for one, have made it a practice in my work to emphasize the avoidance of constant abuse of the ear; not abuse from ordinary and normal hearing, but abuse from abnormal blowing of the nose, which so frequently causes trouble.

I also want to speak of inauspicious cleansing. There isn't any doubt but what all methods of doucheing have an element of danger, and that is, the introduction of some fluid into the middle ear. On the other hand, there isn't any question of doubt but what there is only one real effective method of cleansing the nose in these cases, and that is by some doucheing method. The consequence is we are between the devil and the deep sea. That method is best which cleanses and does the least possible harm. It seems to me this is a thing well worth considering.

In regard to this question of development of ear trouble as the result of nasal disturbances: I have always insisted there is no more danger of introducing fluid in the ear in the cleansing process than there is in the accumulated fluid in the nose, as a result of inability to discharge it, in many of these acute cases. The fact of the matter is that very frequently ear trouble is the result of the flooding of the middle ear with septic discharges accumulated in the nasal passage. This is particularly true in children. Some method must be used to get rid of that, and I favor the douche, properly applied.

DR. GEORGE P. BARTH, Milwaukee: Dr. Pfister asked me, a few moments ago, to say something on this paper.

As applied to school work our greatest difficulty is in getting the patient to see a doctor. All these conditions spoken of are essentially chronic in character, and being chronic the parents become accustomed to having the child about them in that condition, and it is exceedingly difficult to influence the parents to place the child under treatment for a sufficient length of time to cure the defect.

Unfortunately, in some sections, the idea still prevails that tonsils and adenoids should not be removed before the fourteenth year. Every one of us understands what a deleterious influence the pressure of an accumulated mass of adenoids and a large tonsil has on the Eustachian tube.

Another series of cases which cause a great deal of trouble in school work are the stinking pus-discharging ears; they have been treated time and again, and the discharge temporarily checked, but the parents will not listen to anything as radical as a mastoid operation. A pupil comes with repeated attacks of foul-smelling discharge of the ear. It distresses everybody in the room. Of course the prevention of deafness requires getting this child to the specialist as early as possible, when the symptom first manifest themselves, but here we are up against the poor child who cannot pay—or cannot pay much—and the difficulty is to get them to go to the doctor long enough. As soon as they hear in any degree, or so that they can hear their mother shouting to them in the house, they stop treatments and refuse to go further. Those are some of the difficulties we meet with. Chiefly, however, it is the refusal to place the children under treatment. I am very insistent that the doctors in the schools examine the children in the kindergarten first, so that auditory and other defects may be discovered early; but the examination must necessarily be rather crude. The method we adopt is to place the child across the room, and examine each ear separately by means of the talking voice. That is about the best we can do in school work at the present time. Then when a special case is found, a case requiring a more detailed examination, some effort is made to get that child to the clinic, or to some specialist. As everyone here knows we have a school for defective hearing in the city, where we educate deaf children to a sound perception, if we can; if not, to make them expert lip readers.

DR. W. W. GILLESPIE, Milwaukee: In regard to douching the ear: If by this is meant the application of sterile water, or an antiseptic solution to be used in the form of a douche or by any means in which pressure is exerted on the diseased area of the middle ear, it is not as a general rule to be recommended. Each douching or the application of a solution to the ear is a question of physics and pathology. Every man who douches an ear may not exert the same degree of pressure. If the person making the application of a solution to the ear, uses or causes too much pressure, he may push infected material back from the antrum into the mastoid cells, giving rise to an infection in a new area which may involve the brain. Should this area have been previously infected, then, from the application of the douche, or from some form of irrigation, you may get a secondary infection much more acute and serious than the original one. This form of treatment, though employed much in the past by the general physician, is not at the present time to be advised, unless you wish to increase the number of mastoid operations. The mastoid operation is growing less and less, probably due to the better care and improved treatment given the ear. There are thousands of people attending annually the general clinics in the states of Illinois, Wisconsin and New York, and the number of mastoid operations, when compared with those of former years, must be considered a rare thing now in proportion to the number now operated upon out of the greatly increased number receiving treatment daily at these institutions.

In the douching of the nose, as in the douching of the ear, there arises the question of physics and pathology. In the douching or irrigation of the nose, possibly less harm is likely to attend such a practice, for the reason of less immediate proximity to the more delicate organic structures, coupled with the fact that air is highly compressible and elastic, and is in direct communication with the larger cavity of the pharynx, and with the external air through the mouth. While this form of treatment may be applied to the nose with the mouth open, it needs the guiding hand of one fully cognizant of the conditions confronting him. Blowing the nose with much force, together with this form of misguided douche treatment, has resulted not only in the loss of many an ear drum, but also in loss of hearing. If you exert too much pressure through the Eustachian tube on the drum of the ear, you will eventually cause to be opened up a path of infection giving rise to a diseased membrane or ear drum which will soon give way at its weakest point. This gives rise to infection of the middle ear together with its well known complications and results. This excessive pressure must not be confused with normal physiologic pressure or the proper application of requisite pressure to secure the patency of the Eustachian tube to permit physiologic aeration. You will find that people who come to you for defective hearing, fifty per cent or more of them, have had some form of nasal obstruction, thus preventing proper and sufficient aeration through the nose.

All of this and much more has a direct bearing or connection with the advantages obtained through the submucous operation together with the good results following proper treatment of both nose and ear.

The root of hollihocks stamped and mixed with the grease of an old hog, and plaistered to the gout, helpeth it in three or four days.

An absolute specific—that of Aldrovando—for the gout and all other forms of joint inflammations.

The Medical Bulletin of the Lawrence County Medical Society ventures the following remarks:

The average man will give an attorney from three to five thousand dollars together with a lifetime of praise, to keep him out of the penitentiary for from two to ten years, yet at the same time will raise a phosphorescent glow and a kick that can be heard around the world if a doctor charges him fifty or a hundred dollars to keep him out of hell for a lifetime. We are the only people under God's ethereal tent today who keep open shop for twenty-four hours a day for three hundred and sixty-five days each year. We are also the only laborers who keep on working for people who do not pay.—*Memphis Med. Monthly*, Jan., 1918.

Tabrinus says that if you suspend the stone from a sponge about the neck of a child that coughs with a very great coughing, his cough shall at once cease.

THE EYE IN INDUSTRIAL ACCIDENTS.*

BY MAJOR NELSON M. BLACK, M. O. R. C.,

MILWAUKEE.

INTRODUCTORY.

(Conservation of vision or the prevention of blindness is of great importance to the individual and his family, to the employer of labor, and to the state. While a certain number of workmen will almost inevitably be blinded in modern industries, the number of instances in which this deplorable accident occurs can be greatly reduced. To secure such reduction requires the co-operation of all interested parties.

The state may enact and do its utmost to enforce eye-saving regulations, the employer may install every required and available safety appliance without reducing the number of industrial eye injuries and blinding of workers. Without the co-operation of the latter, the efforts of the former two responsible parties will in great measure be defeated.

For the most part, the following information was compiled for the workman likely to be injured, his fellows, shop foremen, and superintendents, who must all co-operate to avoid injuries, and when accidents do occur to meet the emergency in an intelligent manner. As Dr. Black points out, improper treatment of an injured eye may do more harm than the original injury itself, and every individual owes it to himself, to his fellows, to his family, and to the state, which must support citizens incapable of supporting themselves, not to contribute to the calamity by well intentioned but misguided assistance.

Back of all of this of course stands the responsibility of the Medical Profession to prevent injuries by teaching and to conserve in those cases where injuries have occurred.)

This discussion of "*The Eye in Industrial Accidents*" will be taken up under the following headings:

- (1) Accidents in which the workman and his eyes are factors.
- (2) Kinds of eye injuries.
- (3) Prevention of eye injuries.
- (4) First aid equipment for eye injuries.

- (5) First aid in eye injuries.

The first general heading, "Accidents in which the workman and his eyes are factors," must be further divided into the following subheadings, and it will be noted that the first three subdivisions apply to accidents of all kinds.

- (a) Carelessness.
- (b) Familiarity with work.
- (c) Dullness, lack of alertness, or stupidity.
- (d) Poor vision.
- (e) Poor light, not only in the factory but in the workingman's own home.
- (f) Poor sanitary conditions.

If the actual cause of all the accidents occurring daily in the factories, mills, and various fields of labor all over the United States could be truthfully determined, fully one-half would be found to be the result of carelessness, familiarity, and dulled mentality, or stupidity.

As a rule, the man who is careless will not see that the machine with which he is working is in perfect order, or that the tools he is working with are what they should be, and will neglect to use the means of protection against injury furnished him by his employers before starting on a piece of work. As a result he receives an injury. Where does the blame lie?

There is a right way and a wrong way of doing every piece of work. The right way may take a little longer than the wrong way, but in the right way lies safety. There is an old saying "familiarity breeds contempt," and that saying applies right here. For instance, in the case of operating lathes or drills—in fact, any of the equipment of a shop—there are certain instructions which have been worked out by the men who have designed these machines in order that they may be operated with safety. A man may begin work, and follow the instructions absolutely until he becomes familiar with their operation, and then have a contempt for the instructions and put his hand or foot in a dangerous place contrary to instructions, especially when he is paid by piece-work. Having done the thing for so long a time, he thinks there is no danger for him, and he does it just once too often, with a maimed hand, arm, foot or leg, the loss of an eye, or even the loss of his life, as a result.

Dullness or actual stupidity may be a natural characteristic of an individual and in such case that individual should not be employed where his lack of brains would endanger himself or others.

*Read at the 71st Annual Meeting of the State Medical Society of Wisconsin, Oct. 3-5, 1917.

Dullness in that sense is not referred to in this discussion; slow thinking or a brain that is not alert, one that is dulled by late hours together with drinking and carousing, and the resulting loss of sleep, is what is meant. This is not intended to be a temperance lecture, but it is an accepted fact that a man who is rested by a good night's sleep and whose brain is not befuddled with liquor can look out for himself far better than the one who has to think two or three times before deciding what is best to do, especially in an emergency.

To come to the real subject of this discussion, poor vision or inability to see well may be a factor in causing general accidents because a man with poor vision cannot see the details of his work or the parts of his machine he is working with sufficiently well to protect himself against injury. Again, his vision may be so poor that he can not see to get about the shop without running into objects or machinery in motion which might cause an injury, especially if the general lighting is poor. It may be said, of course, that such a man should not be employed in such a place. That is true enough, and such would not be the case if every man who applies for a job had to submit to a physical and visual examination as one must before enlisting in the army or navy, or when applying for a position in railroad or street car service.

The necessity for the physical examination of individuals, male or female, applying for positions in any manufacturing establishments, will be apparent upon a little thought. For instance, no manufacturer, factory superintendent, or foreman would accept or install a machine without inspecting it to see if it were complete in every detail and in good working order. Every employe is a part of the whole working machine of the factory, and any defect in any one part affects the whole. For example, a person with one-fourth, one-third, or even one-half of standard vision can not be considered as competent a workman as one with standard vision. Again one may have standard vision according to the test but may have far-sighted or astigmatic eyes. The use of the eyes for detail work for long periods under such conditions causes eye-strain which results in pain and discomfort in the eyes, and in headaches, and thus interferes with the efficiency of the individual.

In a very large proportion of the cases of poor sight, properly fitted glasses will correct the vision, and if a rule existed requiring physical examina-

tion as suggested above, men with poor vision would find out their difficulty when applying for a position and would, if possible, have their sight improved by glasses. This would prevent many accidents, as well as relieve the individual from eye-strain and headaches, and also enable him to do his work much better and more easily. In many cases the glasses would be a protection against eye injuries. Another factor which should be kept in mind while speaking of eye examinations for applicants for a position, is the payment of indemnity for loss of vision in case of accident to the eye. If there were a record of the man's vision made at the time he was employed, and through an accident he lost one-half or all of the vision of an eye, the basis of settlement would at once be determined without the man's having to pay a lawyer to fight his employers and try to prove he had perfect vision before the accident.

Factories and shops should be well lighted for a number of reasons. First, poor lighting injures the eyes. Second, accidents are much less likely to occur. The maximum number of accidents occur during the time in which artificial light is used. Third, poor lighting detracts from the earning capacity of the workmen and is an extravagance. Good lighting is economical; superior work can be accomplished, vision is preserved; health is correspondingly better; and the factory output increased by from eight to fifteen per cent.

As regards the immediate effect of lighting on output, the Industrial Commission of Wisconsin found that a steel plant just by changing its system of lighting could increase its output at night by over 10 per cent. Regarding immediate effect of lighting on accidents, the National Electric Light Association has published a diagram correlating the monthly proportion of darkness, cloudiness, and sunlight in the city of New York with the monthly fatal accidents in 80,000 industrial plants for three years. In each "correlate" the maximum is around January and the minimum around July. Similarly the accidents per man are higher at night than by day. To a certain extent artificial or weak lighting may increase accidents by fatiguing the eyes and attention, and hence lighting is included under the conditions of factory hygiene likely to influence fatigue. To a large extent, however, the relation of accidents and lighting is immediate; the distribution of accidents over the day being

influenced by the growing objective invisibility of danger points.

Poor sanitary conditions, such as improperly ventilated shops, cause the workmen to become drowsy and dull, to lack the attention required to do good work, and the alertness necessary to prevent accidents.

The latest research has resolved different degrees of ventilation as simply different degrees of heat and moisture combined. To quote Professor Lee:

“Much experimentation has shown that the evil results of confinement in improperly ventilated rooms are caused not by the presence of poisonous products of respiration, but by the heat and the moisture combined. When the air of the chamber was put into motion the temperature of the skin fell, the unpleasant symptoms disappeared very quickly, and the subject felt as if fresh air had been supplied. When the subject had been confined for a considerable time and the symptoms had become well developed, the breathing of pure air through a tube passing from the subject’s face through the wall of the chamber to the outside brought no relief.”

We should, therefore, concentrate our attention on the effect of temperature and humidity.

Authorities are quoted, in regard to very various classes of workers, to show that a warm and moist atmosphere naturally causes lessened activity of nervous and muscular structures; and that activity, enforced in spite of the desire for rest, causes an amount of fatigue disproportionate to the amount of work performed. Exertion begins to be accompanied by depression with a wet bulb temperature of 77° F.; and a dry bulb temperature of 86° F., together with a saturated atmosphere, causes enervation and exhaustion.

Eye injuries may be directly caused by:

1. Dust and dirt.
2. Emery particles.
3. Iron and steel scales.
4. Flying particles from chipping castings.
5. Splinters from presses and lathes.
6. Splinters of copper and brass.
7. Molten metal.
8. Burns from acids and alkalies.
9. Glass in bottling works.

With or without infection in any of these.

10. Intense light.
11. Wood alcohol.

12. Granulated lids of trachoma and other eye infections.

The kinds of eye accidents vary from slight irritation, the result of getting dirt in the eye, to the complete loss of vision or loss of the eye ball itself.

Dust or dirt which gets into the eye may cause only a slight temporary irritation. Occasionally, however, dirt or dust carries germs into the eye that set up a severe inflammation, and may, if not properly treated, result in partial or entire loss of vision or the eye itself. In most instances the germs are introduced into an eye which has received an injury, by rubbing it with dirty fingers or handkerchiefs.

Probably the most frequent injuries to eyes in machine shops are those due to emery sparks. These emery particles are white hot and when they strike the eyeball, burn into the surface and thus make it harder to remove them than cold objects which only lodge on the surface. Consequently they are a great source of danger, as the outer skin or coating of the eyeball is broken and germs that may be in the eye or carried in by dirty hands, handkerchiefs, or instruments used in trying to remove them, have a raw surface, in which to develop, which is ideal for their growth.

Such an infection may set up an inflammation that becomes an ulcer of the surface of the eye, which when healed results in a scar that greatly interferes with vision. (The fact that these emery particles are white hot when they fly from the wheels may be seen from the manner in which they are welded fast to glasses which have some times been used for protection.)

The scales that fly when hammering recently heated iron or steel cause injuries similar in character to those produced by emery particles. The dangers and results, so far as the eye is concerned, are about the same, except that the scales are frequently very thin and have sharp edges and penetrate the eyeball deeper, even at times passing completely through the outer coats into the interior of the eye. In such event, they fall under the class of accidents known as penetrating injuries, such as occur in the process of chipping or in hammering one piece of steel with another, or the slivers that frequently fly from presses, punches, drills or lathes. These, even when very small, fly with such force that they penetrate the eyeball and even go through the lids and pass through the eyeball and lodge in the tissues behind it. When these pieces

are small, the feeling is about the same as when something lodges on the eyeball itself. Vision may not even be disturbed, and it is hard to make the individual realize the seriousness of the injury and that something has passed into the interior of the eye which, if not removed, may result in blindness or loss of the eye itself. On the other hand, the flying piece of metal may be so large that the injured man feels as if he had been struck by a fist. He has an exaggerated idea as to its size, and is sure it cannot be lodged in the eye, especially as there is, as a rule, but little actual pain in the eyeball itself.

In addition to actual injury done the eye by these penetrating injuries there is a danger that some dirt or germs have been carried into the interior of the eyeball which may set up an infection which will result in loss of vision of the eye itself, even if the injury from the piece of metal does not cause such loss.

Next to penetrating iron and steel injuries, those from copper and brass are most common, though fortunately much less frequent in industrial circles than those from iron and steel. The results from copper and brass penetrating injuries are much more serious; mention of them will be made later.

Burns from molten metal, such as occur in pouring molds, are not infrequent. These may be only slight surface burns, or may be deep and very serious as to loss of vision.

Burns from acids and alkalis are of frequent occurrence, especially lime burns among mortar mixers and plasterers. Even old plaster, after it has been on the walls for years, if gotten in the eye may cause a very serious burn. Due to the slacking of unslacked lime a dehydrating of tissues owing to lime's avidity for water and a burn on account of the heat generated.

Workers in bottling works are frequently injured by the bottles breaking and a piece of glass flying into the eye, cutting it or even penetrating it. Flying corks occasionally cause eye injuries.

The development of oxy-acetylene and arc welding in the industries has in the last few years been productive of a new form of eye injury. This is the result of exposing the unprotected eyes to the intense light generated in these processes, and is a burn due to what is known as the ultra violet rays which are produced in large quantities. The effect upon the eyes is practically the same as a "sun burn" when the unprotected body is exposed

to the sun's rays, and, like a sun burn, is not noticed until several hours after the exposure. Not only the individual who does the welding, but anyone standing near watching the process may be affected.

Another form of blindness which has developed in modern industries is that due to drinking wood alcohol or inhaling its fumes. The numerous deaths and cases of blindness which result every year from drinking wood alcohol are not, of course, incurred in the line of work, but painters who use varnishes or shellacs mixed with wood alcohol in closed rooms, or more especially in painting the inside of beer vats, frequently are made blind from inhaling the vapor of this treacherous material. The following is a case in point. A painter who was doing a very fine piece of graining work and was particularly conscientious about avoiding any contamination of the fresh surface with dust, closed the room in which he was working for several hours, while he finished the job with varnish mixed with wood alcohol. Two hours after finishing the work his sight failed entirely, and although he finally recovered enough sight to barely find his way about, he remains a county charge.

Granulated eyelids, or trachoma, is a frequent cause of almost complete blindness, and has become a scourge in this country, brought from abroad by the lowest type of immigrants. This disease is quite prevalent in many large cities in spite of the fact that today every immigrant who presents even a suspicion of the disease is turned back. Though there are other diseases more violent and more immediately dangerous than trachoma, there is none which lasts so long or which suffers so many relapses, and none except those which result in total blindness, that causes such permanent disability and is so stubborn to treatment as granulated lids. It is extremely contagious, and roller towels and wash basins which are used in common are the most frequent means of spreading the disease.

Many other eye infections which result in severe inflammation are carried from the eyes of one person to another by the use of the same wash basin, soap, and towels.

PREVENTION OF EYE INJURIES.

A large proportion of general industrial accidents, particularly eye injuries, would not occur if more care were observed in following the rules, regulations and instructions that govern each indi-

vidual operation in every shop, mill and factory. These should be posted in plain sight and be printed in several languages and when a man is set to work at any job, the foreman should make him read them.

As employers are required by law to furnish necessary and adequate protective measures and post instructions, it is equally incumbent upon the employes to co-operate and use these protective means according to regulations. Many workmen deem this co-operation by employes unnecessary. They seem to think that the protective means and instructions are put there to make their work harder. In order to enforce such co-operation the Industrial Commission of this state found it necessary to issue an order reducing the compensation due a workman fifteen per cent in case of an accident, if it can be proved that the available means of protection were not used.

Preventing dust from getting into the eye is a hard problem, only to be solved by the use of goggles which have that portion between the lenses and the face enclosed with a mesh fine enough to keep out the dust. This is impractical in most instances, because there is little or no ventilation about the eye and the glass soon becomes fogged from the heat and moisture radiating from the eyes and skin, and interferes with vision.

The only industries where such goggles are absolutely necessary are those in which the amount of dust is so great that it is impossible to see without some such protection, such as the sand blasting of castings, or like occupations. In this work it is equally necessary to prevent breathing the dust, so as a rule, a mask covering the entire face is used.

Dirt is usually carried into the eyes by rubbing the lids with dirty fingers or handkerchiefs, or is deposited between the lids by the wind, or blown in by fans. The greatest danger from dust or dirt is from the germs that may be carried into the eyes where, with the heat and moisture found there, they have an ideal place in which to breed. The dust or dirt itself is a source of irritation which quickly disappears on washing out the offending material, but such washing out will not always remove the germs.

Some varieties of germs set up an acute inflammation of the eyes which may result in loss of vision or of the eye itself; others only cause some congestion and make the eyes feel uncomfortable. One of the most frequent sources of eye infections

in industries is the attempt to remove a foreign body from the eye by one who knows nothing about the proper method of doing such a thing, and who uses the corner of a dirty handkerchief, the point of a dirty knife blade, the chewed end of a match or toothpick, or similar object. The man who has something in his eye is unable to hold it still because of the pain, and the man trying to remove it keeps jabbing at the eye until he has removed the object or the injured one can stand it no longer, with the result that the outer skin of the eyeball is scraped off, making a fine place for the breeding of the germs that may already be in the eye or that are carried in by the scraping. A badly inflamed eye, or an ulcer may result. The only means of protection against emery particles is the use of protective goggles, and they should be screened goggles, as the emery particles frequently strike against the face and bound from there, striking the rear surface of the unscreened lenses, and glance into the eye. This is shown by the number of particles welded to the rear surface of the lenses of unscreened goggles.

Goggles for workers at emery wheels and for protection against iron and steel scales do not have to be heavy affairs, as the force of the flying particles is not sufficient to break ordinary thin glass. Such is not the case with men who are doing chipping; here the glass must be thick and strong enough to resist a hard blow from a good sized piece of metal flying with tremendous force. Such goggles should be used by men working at drills, presses, punches, stamping machines, and lathes.

Protection against molten metal is a hard proposition for the reason that the men are working in a hot atmosphere and perspiring freely, and almost any form of goggle quickly becomes steamy and fogged and interferes with vision. Isinglass goggles have been tried but have not proved very satisfactory. Some sort of goggle is necessary, however, for adequate protection.

Burns from acids and alkalies can be prevented, as a rule, by wearing glasses of almost any kind.

Injuries from flying glass or corks in bottling works may be prevented by using protective goggles.

The problem of eye protection in industrial processes involving high temperature and intense light which contains excessive amounts of ultra-violet light, must be considered from two standpoints.

Exposure of the unprotected eyes to very intense light sources, rich in ultra-violet rays, produces photophthalmia, an acute and painful inflammation of the outer coats of the eyes. Long continued or frequent short exposures to ultra-violet radiation of moderate intensity may result in severe inflammation by its cumulative action. Instantaneous exposure from electric flashes due to a short circuit in high voltage currents frequently causes a very severe inflammation. Many instances of lasting and even permanent injury to the eyes have been reported from comparatively short exposure to very intense light. Some of the occupations in which danger from intense light is incurred are oxy-acetylene welding, arc welding, glass blowing, furnace tending, and arc experimenting.

The ultra-violet radiation which produces irritation and severe inflammation must be screened from the eye. The intense light must be reduced to a safe brightness to prevent the glare effects which markedly interfere with vision. This must be accomplished without reducing the ability of the eye to distinguish details.

Until recently, in case of apparent need for protection against intense light, an individual has selected a glass which has met his personal preference, this glass being accepted for use generally in that particular plant. In most instances no effort has been made to determine the danger to be guarded against or the absorptive properties of the glass selected.

Investigation of the properties of a number of colored glasses on the market by spectroscopic analysis has seemed to indicate conclusively that some of those heretofore reported to possess various desirable qualities are actually of but little more value as a protective measure for the use intended than clear glass. Ordinary clear spectacle glass affords some protection against the ultra-violet rays as it absorbs a small percentage of them. Smoked glasses show slightly more interference with the passage of the harmful rays than clear glass. Dark blue glass transmits *more* ultra-violet rays than clear glass of the same thickness. The irritating rays transmitted by such glass can be borne without danger for a few minutes but do cause decided irritation from their continued action. For prolonged exposure such protection is absolutely futile. It is therefore imperative, in order to insure safety, that a glass which absorbs with certainty all the ultra-violet rays be used when the eyes are exposed

to light rich in these dangerous rays for more than a few minutes at a time.

Glass in which the color tends toward a yellow or yellowish green affords the greatest protection from the harmful rays. Such glass is found on the market under the name of amber euphos, fieuzal, akopos, and Noviol glass. Even this glass must have added to it, in the process of manufacture, a dark smoked tint to reduce the intensity of the glare in order that they may be used with comfort.

Deep red glass is an effective protection against dangerous light and is in general use in many industries. It is usually combined with yellow, blue, or green and blue glass. The objection to such a combination is the inability to distinguish details and to see to get about, also the increased weight caused by using two or more pieces of glass.

The protection against blindness from wood alcohol is a serious question. The only means of prevention is to avoid it absolutely. It must not be taken internally, applied to the surface of the body, or its fumes inhaled. Workers who have to use it must be in well ventilated rooms with a free circulation of air, and must be instructed as to the danger that may result from inhaling the fumes. All containers must be marked with skull and crossbones and inscribed "Poison." "May cause blindness if drunk, applied or inhaled." Every state should pass stringent legislation requiring every article or substance containing wood alcohol to be labeled as above. In the meantime, it is the duty of superintendents, foremen, vocational teachers, and other enlightened individuals to obey the unwritten law. Intelligent and conscientious people need no legislative enactments for their guidance.

Protection against granulated lids and other eye infections can only be maintained by strict personal hygiene and sanitary surroundings. Individual towels and individual soap have become as imperative a necessity as individual drinking cups.

Fortunately in this portion of the United States granulated lids are rare, but that in no wise should keep one from observing the laws of personal hygiene.

The means of prevention of eye injuries can be fairly well summed up in a few words: Safety First! Don't take a chance! Use every means provided to prevent accidents to yourself and others. Follow instructions, rules and regulations. They are given you for a purpose.

FIRST AID EQUIPMENT FOR EYE INJURIES.

The first aid equipment for eye injuries in factories, mills and shops should consist, first of all, in an individual in charge who has good common sense, one who knows when he can attend to an injured eye safely, and when to let it alone and send the case to someone qualified to tend it, after he has applied a protective bandage for the main purpose of keeping the workman's dirty hands away from it. This is most important! Second, sterile solutions of saturated boric acid and normal salt should be on hand for flushing the eyes. A bulb syringe to use in flushing the eye is essential. A supply of sterile absorbent cotton and bandages, plenty of safety and ordinary pins, adhesive plaster one inch wide on spools, ordinary wood toothpicks and medicine droppers are a part of the equipment. As far as the medicine is concerned a fresh 10 per cent solution of argyrol or some similar silver salt is a good thing to have on hand to drop in the eye after the removal of a foreign body, when the man can go back to work immediately. This solution spoils with age however, and should be freshly made up every two or three weeks. A tube of bichloride of mercury salve of a strength 1-3000 is much better and does not deteriorate.

With the above equipment simple eye injuries can be taken care of in practically any industrial institution. Of course it requires considerable diagnostic ability to determine that an eye injury is only a simple one.

FIRST AID TO EYE INJURIES.

The first important rule to teach in first aid work in eye injuries is to keep the hands and any dirty object away from the eyes.

Second, report immediately to the foreman or person in charge of the first aid department.

Now right here much depends upon the foreman. If he is one of those so often found in factories who has something of a reputation as a foreign body cornea expert because he can see spots in the eye that others overlook and thinks he is perfectly capable of removing all foreign bodies by means of a toothpick, lead pencil, jack knife, or a file or even his tongue, the injured eye is taking chances and frequently a large virulent ulcer of the cornea follows. While this "expert" foreman may have saved a couple of dollars for his employers a dozen times and gotten away with it, one case of infected cornea

will cause twice that much loss to the factory in money and loss of the services of its workman to say nothing of the resulting loss of vision, which the workman will have with him always.

For the removal of dust and dirt, the lids should be gently separated and the eye flushed with a boric acid or normal salt solution, followed by a couple of drops of a 10 per cent argyrol solution or the application of a small bead of Bichloride salve, bandaged, and the man sent to the company doctor. This rule also applies to any injuries in which the foreign body has imbedded itself in the eye or penetrated it.

All cases of penetrating injuries should be sent to the doctor. Frequently the injured man has so little discomfort and so little interference with vision, he will not even apply for First Aid, and if he does do so will refuse to go to the doctor. As a result, many eyes are lost which otherwise could have been saved. If the penetrating body is small, it is frequently impossible for the injured person to tell whether there is anything in the eye or not, and the ordinary means of examination used by a doctor may not be able to discover it. In such cases it is of the greatest importance to determine by means of the X-ray if there is a foreign body within the globe, for if foreign bodies are not removed they eventually destroy vision or cause loss of the eye.

By taking an X-ray picture with the patient facing the plate and also a side view, the foreign body may be localized, and it may thus be determined whether the particle is in the eye or has passed clear through into the eye socket.

If the X-ray succeeds in locating the foreign body within the eye, an attempt is made to extract the piece if it is iron or steel, by means of a magnet through the opening it made in going into the eye; or if it is considered too dangerous to attempt removal in that way, a second opening is made in the eye-ball in a part less liable to produce injury, and the piece removed through the second opening. The removal of a piece of metal by means of a magnet can only be accomplished when it is capable of magnetic attraction, and this is the reason why penetrating injuries from copper, brass, lead and many alloys are so much more dangerous than from iron or steel. There are also certain varieties of steel that contain a high per cent of manganese used in making highly tempered tools, which are not sufficiently attracted by a magnet. In such

cases it is often necessary to remove the eye-ball in order to save the other eye, as the irritation set up in the injured eye is frequently transferred to the good eye, causing it to go blind. The good eye may be affected at any time from a few weeks to thirty and forty years after the injury to the other eye. Thus the necessity of being sure there is no foreign body in the eye will be appreciated.

The advice commonly given for first aid in burns from acids is to use weak alkali solution, such as ammonia; and for lime burns weak acids, such as vinegar. This is bad advice and may work harm. The best treatment is to put the individual on his back and pour plenty of water between the well opened lids as quickly as possible. Then apply the bichloride salve if obtainable, or oil, bandage the eye and send the patient to the doctor.

Burns from intense light do not make themselves manifest for several hours after the exposure. When they do so the services of a physician should be sought at once. This advice applies to those suffering from loss of vision from wood alcohol, and to those having inflamed or infected eyes from other causes.

The three cardinal points in factory first aid in eye injuries may be summed up in three words:

Cleanliness! Non-interference!! and Protection!!!

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

The fourth edition of this excellent book is before us. We see no radical changes from previous editions but note a number of new drawings and photomicrographs illustrating gynecologic pathology. This edition certainly was highly desirable in a book of this kind.

One new chapter has been added on "The Internal Secretory Glands in Relation to Gynecology". This, written by Dr. Hugo Ehrenfest, is an excellent resumé of our knowledge and steers carefully between the Scilla of total disbelief and the Charybdis of over-enthusiasm.

The whole book is well-balanced, profusely and beautifully illustrated and represents a fine sample of the book-maker's art. It can be cordially recommended to all practising physicians for their guidance in this important branch of Medicine.

REPORT OF TWO CASES OF ANTHRAX.*

BY EDMUND H. MENSING, M. D.,

MILWAUKEE.

Anthrax has of recent years become an important industrial disease, due to the fact that an increasing number of cases is being reported annually from various parts of the country. One reason for this increase is the increasing demands by tanners for foreign hides, which come from districts where anthrax is extremely prevalent among cattle and sheep.

Anthrax in man occurs in two forms, (a) the *external*, located usually on some exposed part of the body, (b) *internal*, due to infection of respiratory or gastro-intestinal tract.

Since the latter, i. e., the internal type, is practically unknown in the United States, we shall devote our attention to the external type, commonly known as malignant pustule.

This disease is transmitted to man only from infected animals and for that reason it is most frequent among workers in tanneries and hair and brush factories; and amongst veterinary surgeons and farmers. In order to produce a lesion, the specific organism, the *Bacillus anthracis*, must penetrate through some break in the continuity of the skin, such as a scratch or abrasion.

In animals the usual mode of infection is through the gastro-intestinal tract, due to the ingestion of forage contaminated by the excreta of cattle affected by the disease. It is especially prevalent among the cattle of Italy, Russia, China and South America.

We are all familiar with the study of anthrax bacillus and its spores. The resistance of spores to heat and antiseptic solution is very great and in a dry state they retain their vitality for years.

The lesion is usually single. The incubation is 1 to 3 days. It commences as a single pimple, which gradually enlarges until it resembles somewhat an ordinary boil. It is differentiated from the latter, in that it has a black depressed center, due to necrosis of the tissues, surrounded by a raised, reddish margin and closely surrounding this is a circle of small vesicles.

In contradistinction to a boil, the patient has few or no local symptoms. The practical absence of

*Read before the Milwaukee Medical Society, Dec. 11th, 1917.

pain in the lesion is a most characteristic sign and should immediately arouse one's suspicion. Another feature is the absence of pus in the lesion until after sloughing has occurred.

Usually after a few days a soft, painless edema manifests itself in the region of the pustule. This spreads rapidly and often reaches considerable proportions.

The symptoms of toxemia are often slight at first and even after extensive edema has occurred, the patient may exhibit few or no general symptoms. The mildness of the general symptoms is not however an index of the severity of infection, because many cases with a stormy onset recover rapidly, whereas others with little or no fever may go to a fatal termination.

In view of the mode of infection, which occurs usually from the handling of infected hides and hair, furthermore, in view of the increase in the number of cases being reported, it is important that certain prophylactic measures should be introduced.

The United States' authorities demand the immersion of all hides in $HgCl_2$ (1-1000) for one-half hour, but this has proven inadequate, in view of the fact that the mercury cannot be made to penetrate every part of the hide on account of its albumen-coagulating properties.

Workers who handle hides, furs and hair must be instructed immediately to report every abrasion and scratch, or any little pimple on exposed parts; and the tanners must take precautions to maintain greater cleanliness.

Treatment.—It is surprising what numerous measures have been suggested for the treatment of this condition. They can be divided into two groups: (1) Surgical, (2) Non-surgical.

The only surgical measure that seems feasible is the early free excision of the lesion with a cautery knife. Incision or excision with the cold knife are to be condemned on account of the danger of opening new areas of infection. After the edema has appeared, surgery is not advisable.

(b) The Non-surgical.—Evidence is accumulating which goes to show that the application of hot dressings, preferably of $HgCl_2$, is the best treatment for all cases of external anthrax.

Recently a large number of cases has been reported from Massachusetts, where this simple method has been used, with a mortality of less than 10 per cent.

Finally, the use of serum must be mentioned. Although the study of immunity to anthrax has been barely begun, it seems that the use of anti-anthrax serum is of some importance. It is made by immunizing the horse to attenuated cultures of anthrax bacilli.

Recently, Kraus of the Argentine, reported 140 patients (with one death), all of whom had received normal bovine serum.

REPORT OF CASES.

(1) Male. Tannery worker. First seen November 2nd, 1917. Had a characteristic local lesion on the right side of neck with no general symptoms.

Anthrax bacilli demonstrated by ordinary slide preparations and subsequently corroborated by cultural methods.

Cautery excision of growth and intravenous injection of 70 c.c. of Mulford's anti-anthrax serum. Subsequently received six doses of 10 c.c. each of serum intramuscularly. Uneventful recovery.

(2) Male. Traveling man. Sold brushes of various kinds. First seen November 10th, 1917. Lesion located on left side of neck. Pustule had been incised under the assumption that it was an ordinary boil. Tremendous edema extending from left temple to middle of chest. No fever. No general symptoms.

Wide cautery excision of lesion and numerous cautery punctures of edematous area. Received 240 c.c. of anti-anthrax serum intravenously. At first edema diminished and then grew worse. Patient became markedly toxic and died November 11th.

AMERICAN ADDRESSES ON WAR SURGERY. By Sir Berkeley Moynihan, C. B., Temporary Colonel, A. M. S., Consulting Surgeon, Northern Command. 12mo of 143 pages. W. B. Saunders Company, Philadelphia and London, 1917. Cloth, \$1.75 net.

These Addresses on War Surgery are the ones delivered in Chicago and elsewhere during the recent trip of the author to this country. The volume includes five addresses, The Causes of the War, Gunshot Wounds and Their Treatment, Wounds of the Knee-Joint, On Injuries to the Peripheral Nerves and Their Treatment, and Gunshot Wounds of the Lungs and Pleura.

The author has a delightful style and what he has to say is so interesting that it is both pleasurable and profitable reading.

Anyone who wishes an hour's delightful entertainment, will find it in this small volume.

THE WISCONSIN MEDICAL JOURNAL

OFFICIAL PUBLICATION OF THE STATE MEDICAL SOCIETY OF WISCONSIN

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Address all business communications to THE WISCONSIN MEDICAL JOURNAL, 504 Goldsmith Building, Milwaukee

Vol. XVI.

April, 1918

No. 11

EDITORIALS

THE POLIOMYELITIS SITUATION.

IT looks very much as if poliomyelitis were to be our unwelcome guest this summer. Already over forty-eight cases have been reported to the Milwaukee Health Department with fourteen deaths. The cases have not all been running true to form by any means. There have been several of the cerebral type with spastic paralysis of one or both arms and retraction of the neck. So far, all the spinal fluids have been clear and have shown increased cell count.

It has not been possible to trace any connection among the cases. They have been in all parts of Milwaukee and have had no history of contact with cases suspected even of being poliomyelitis.

After diagnosis is made, the most important measure in therapy is curbing the tendency to do something. The less drugging and the less handling of the patient in the early, acute paralytic stage, the better for the patient. Several weeks after convalescence, massage and means to prevent overaction of groups of muscles are to be used.

That there are poliomyelitis carriers is beyond doubt. No reliable and comparatively simple method has as yet been discovered to detect the carriers. The organisms probably enter through the nose and the upper air passages to the brain, and also enter through the gastro-intestinal tract. The New York epidemic revealed many cases of intestinal disturbances which were in all likelihood cases of poliomyelitis (intestinal form).

Infantile paralysis is a bad name because paralysis is not always present. The paralysis may be so transient as to be missed, or such a small muscle group, or even single muscle, may be affected that no loss of function results. We trust that we shall not be visited, but the indications point that way. It is well for us to be on our guard. Isolate cases of the disease and keep the nasal passages and hands clean.

DIGITALIS FOR UNCLE SAM'S MEN.

IT is with a feeling of pardonable pride that we record the fact that the digitalis raised last year in the drug plant gardens at the University of Wisconsin is considered so efficacious that the whole supply amounting to 150 pounds has been given to the government.

The University again reveals its great usefulness. There have been unfortunately in our State those who have taken every opportunity to criticize our famous University. It is such facts as that noted above that the carping critics should take to heart.

We are told that this digitalis is the best to be had. Other plants are grown in Minnesota and Washington. The more perfect leaves will be used for powder from which infusions may be made directly, the other grade will be used for tincture. After careful standardization it is ready for use. As long as we have such Botanical Gardens constantly being used as experiment stations, we need not have any fear that we shall be without the potent drugs for our patients.

AMERICAN SALVARSAN.

THE Federal Trade Commission, on November 30, 1917, issued orders for licenses to manufacture and sell the product heretofore known under the trade names of salvarsan, 606, arsenobenzol, and arsaminol, to the following-named manufacturers: Dermatological Research Laboratories, of Philadelphia; Takamine Laboratory (Inc.), of New York; and Farbwerke Hoechst Co. (Herman A. Nutz Laboratory), of New York. The drug will be manufactured and sold under the name of arsphenamine."

This quotation taken from Public Health Reports, Dec. 7, 1917, tells the last chapter of a fight which has been carried on for some time by the Medical Profession against the monopoly and exclusive rights to salvarsan. Did it ever occur to you, gentle reader of these my lucubrations and effusions, that in your zeal to use everything stamped "Made in Germany" you were but the innocent dupe of a studied propaganda?

So far as our meager knowledge goes, the American scientist (the dollar-chaser, so say the German the light. We are realizing the motives behind all that has been done to us during the past years. At last we have shaken ourselves loose from the most obnoxious monopoly. We should have no trouble in getting all the arsphenamine we want.

Remember that it was Herman A. Nutz who recently went to Washington and fought with all his power to retain the monopoly of salvarsan. *Verbum sapientis sufficit.*

mans) has never patented any process or any drug or any serum which was related to the amelioration of illness and suffering among the human race. From ether to Dakin's solution and including the Babcock cream method, no patents, no monopoly exists. All that sort of crooked, blood-sucking methods are exclusively in the hands of quacks, charlatans, and Germans. Thank God, we are see-

 MEDICAL REPRESENTATION IN THE NATIONAL CABINET.

IT is a travesty on human effort that often after years of careful consideration, diligent planning and great labor, the thing sought for is attained without effort, and arrives from a quarter quite unexpected. Witness the great advancement in the

temperance movement during the period of the world war. Greater strides have been made against the evils following the abuse of alcoholic beverages in the three years than in the preceding half century in spite of the intelligent and persistent cooperation of some of the best minds of the world.

For many years the medical profession has been striving in vain for representation in the cabinet at Washington. Its argument could not be appreciated, but we become involved in a great war and are suddenly called upon to place one or more million men in the field and the medical profession is called upon in great numbers to offer its services gratuitously to see that those men are fit. How greatly this task might have been expedited had there been a medical representative in the national cabinet and a full pre-war medical organization at Washington! Much time has been lost in medical organization and qualifying men in the profession so that they could render the desired service.

It is difficult to conceive of any good developing from the wholesale bloodshed and destruction of life and property in this war, but it is to be hoped that the people and government will appreciate the sacrifice and effort on the part of the medical profession and that we may all learn the lesson of our almost fatal unpreparedness. The war should prove a powerful argument in favor of a medical man sitting with the cabinet. Human health and life are as important as any other part of our government.

 THE DOCTOR AND THE INSURANCE COMPANIES.

THE interest that has been taken in the problem of payments by insurance companies for making final reports for claims for indemnity, and the notice that has been taken of the correspondence published in the last two numbers of the Journal, not alone by medical men, but by insurance men as well, leads me to ask for suggestions from my colleagues as to how best to discover a remedy for the present evil conditions. The problems to be faced are as follows: do we wish, as physicians, to be partners in the swindle that makes us look to the insured man—who has already paid for his insurance—for our fee, when the sole benefit arising from our work in making out the claim blank, goes to the insurance companies, and not to the insured?

Has the medical profession become so accustomed to this imposition that has been placed upon it by the insurance companies, that it has lost all sense of decency and self-respect, so that it fears to break the shackles that the insurance companies have bound upon it?

Would it be possible to correct the evil by agitation of the question involved, at meetings of the county societies, at which meetings the matter might be discussed with representatives of the insurance companies, the object being to show them that they are demanding from us without remuneration, something to which they are not entitled.

In my own experience, I have found that an absolute refusal to make out these blanks, has brought from the insurance companies a letter offering to pay for the service, and there is no reason why every other self-respecting physician should not do the same, and with the same result.

Shall we begin to use our influence with the men who have been injured, and who bring us these blanks to be filled out, to urge them to abandon their insurance with companies which do not pay the physicians, and to take out insurance in those companies that do pay?

There is no law, custom, or courtesy, that makes it necessary for us to pay any attention, either to the insurance companies or their agents, in their demands, unless they pay for what they wish to obtain; and if the profession as a whole adopt this attitude which is one that comes within the limits of self-respect; the insurance companies will crawl to us on their bellies offering us suitable fees for the valuable information which is ours, and which they need.

Write to me and tell me what you think about it all.

H. M. BROWN, M. D.

ASSOCIATION NEWS

THE CHICAGO SESSION.

COMMITTEE ON ARRANGEMENTS.

The Local Committee on Arrangements for the Annual Session of 1918 to be held in Chicago, June 10-14, is actively engaged in perfecting plans for the comfort and entertainment of the Fellows of the Association and their guests.

All correspondence with the Local Committee on Arrangements or with any of its subcommittees should be addressed to 25 East Washington Street, Chicago.

CLINICS.

The chairman of the subcommittee on clinics, Dr. Charles F. Humiston, announces that there will be a series of clinics for the Fellows of the Association on Thursday, Friday and Saturday, June 6, 7 and 8, and on Monday and Tuesday, June 10 and 11. Further announcements regarding the clinics will appear in these columns from time to time.

ALUMNI AND SECTION DINNERS.

Alumni and section dinners will be held on Wednesday evening from 6 to 8 o'clock so as not to conflict with other events which are being planned. The chairman of the subcommittee on alumni and section entertainment, Dr. J. H. Stowell, announces that his committee is co-operating with officers of alumni associations in arranging for reunions. The committee desires, also, to assist the officers of those sections which desire to arrange for section dinners.

PRELIMINARY PROGRAM,

WISCONSIN SURGICAL ASSOCIATION.

Fifth Annual Clinical Session to be held in Milwaukee Wednesday and Thursday, May 8th and 9th, 1918. Headquarters, Hotel Wisconsin.

WEDNESDAY, MAY 8TH, 1918.

Clinics.

- St. Joseph's Hospital—
 8-10—Dr. C. M. Echols.
 10-12—Dr. F. Stratton.
 2-4—Dr. J. S. Thomas.
- Mount Sinai Hospital—
 8-10—Dr. S. J. Wetzler.
 10-12—Dr. H. Greenberg.
- St. Mary's Hospital—
 2-5—Dr. G. V. I. Brown.

EVENING SESSION, 8:00 P. M.

Hotel Wisconsin.

President's Address—Dr. H. M. Brown.

Election of Officers.

Address by an invited guest; announcement to be made in bulletin.

THURSDAY, MAY 9TH.

Clinics.

- St. Mary's Hospital—
 8-10—Dr. W. C. F. Witte.
 10-12—Dr. Chas. H. Lemon.

Trinity Hospital—

8-10—Dr. L. Tisdale.

10-12—Dr. M. L. Henderson.

AFTERNOON SESSION, 3-5 P. M.

Hotel Wisconsin.

“Ureteral Stones,” with Lantern Slides Illustrations.

Dr. E. A. Fletcher, Milwaukee.

Paper title to be announced later.

Dr. A. G. Sullivan, Madison.

EVENING SESSION, 8:00 P. M.

Hotel Wisconsin.

Dinner and Joint Meeting with the Medical Society of Milwaukee County.

“Surgical Efficiency,” Dr. V. A. Mason, Marshfield.

“Surgical Treatment of Prolapsus Uteri.”

Dr. Wm. E. Fairfield, Green Bay.

There will be a special bulletin issued daily. Register your arrival immediately at the Information Bureau at the Hotel Wisconsin, and receive the bulletins and such other information regarding the meeting as it is not now possible to be published. Tickets for the dinner will be presented to each member at the Registration Bureau. Don't forget to call for yours.

LOCATION OF HOSPITALS.

St. Mary's Hospital, 448 Lake Drive.

Mount Sinai Hospital, 12th and Cedar Streets.

Trinity Hospital, 9th and Wells Streets.

St. Joseph's Hospital, 4th and Reservoir Avenue.

MENINGITIS.

In a preliminary report W. W. Herrick, New York (*Journal A. M. A.*, Jan. 26, 1918), gives an account of the epidemic of meningitis at Camp Jackson, Columbia, S. C. More than 140 cases were observed and classified as abortive, ordinary and fulminating. The last generally showed extensive purpura with death in from four to ten hours, without the clinical or necropsy findings of meningitis. The disease, he says, is not primarily a meningitis but is a generalized systemic invasion by the meningococcus with possible secondary involvement of the meninges, joints, heart, testicles, conjunctiva, sclera, pleura, and lungs, from all of which regions, in addition to the tonsils and pharynx, the micrococci have been isolated. In many cases the systemic symptoms appear from twenty-four to seventy-two hours before involvement of the meninges but are not at all characteristic. Moderate fever, weakness, mild apathy, coated tongue, pharyngitis or coryza, and mild digestive disturbances are most common. Headache and other cerebral symptoms are generally absent at this stage. In about 75 per cent of the cases in this epidemic, the earliest sign of value in diagnosis was the petechial rash. In order of frequency, it appears in the deltoid regions, on the hips,

trunk, extremities, mucous membranes, and face. The purpura of the fulminating cases does not originate in these petechiae, but is apparently a separate lesion. The meningococcus is usually found in the spinal fluid withdrawn at the first or second lumbar puncture, and often from six to thirty-six hours before showing cellular increase and cloudiness with the characteristic clinical picture. The writer's impression is that the cerebral precedes the spinal involvement and he advises that the lumbar puncture be repeated at intervals of from three to six hours in order to drain the meningococcus from the brain. Thorough centrifugation and careful examination of the sediment will usually reveal one or two pairs of meningococci. Diagnosis in the stage of meningococcal sepsis may be made many hours before it has been able to show its characteristic brain symptoms. The writer says the name usually given is misleading, and says, “spotted fever” is more satisfactory but inadequate. “In the light of the foregoing observations,” he declares, “the usual methods of treatment have been modified, and with success. In the stage of sepsis before meningitis has developed, routine intravenous administration of meningococcus antiserum in doses of from 20 to 60 c.c. has been effective and has in many cases been followed by striking improvement. Such doses have been administered every twenty-four hours during the first three or four days of the disease. We feel that intravenous serotherapy should precede the intraspinal, and that in these cases of primary meningococcus sepsis, it is probable that such intravenous serum administration is of more importance than the ordinary intraspinal treatment. The latter must not be neglected, but is probably best deferred in some cases until the spinal fluid becomes cloudy. It has been pointed out by Amoss and his co-workers that the injection of serum intrathecally increases the permeability of the choroid plexus for the virus of poliomyelitis. It is important that the same question be experimentally investigated in meningococcus sepsis.”

FOOD FOR THE SICK. A manual for Physician and Patient. By Solomon Strouse, M. D., Associate Attending Physician, The Michael Reese Hospital; Professor of Medicine at the Post-Graduate School, Chicago, and Maude A. Perry, Dietitian at the Michael Reese Hospital, Chicago. 12mo of 270 pages. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, \$1.50 net.

Strouse and Perry have done a service in emphasizing the necessity for a more accurate knowledge of foods in sickness. We have long felt that the little attention paid to diet by the average physician is to say the least, regrettable. No physician says to the druggist, “Give this man a little strychnine and iron and arsenic.” But says the druggist, “How much?” “Oh,” replies the doctor, “Just a small amount.” Now until the medical profession learns to write food prescriptions with the same care that he writes for his numerous (and at times, inert and worthless) drugs, dietetics will never attain the importance in treating the sick which it should have. We therefore welcome this book and wish that it might be read and frequently consulted by doctors and patients.

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Richland	R. H. Delap, Richland Center.	G. Benson, Richland Center.
Rock	M. P. Andrews, Beloit.	E. B. Brown, Beloit.
Rusk	J. C. Baker, Hawkins.	L. M. Lundmark, Ladysmith.
Sauk	F. D. Hulbert, Reedsburg.	Roger Cahoon, Baraboo.
Shawano	J. B. Gordon, Shawano.	W. H. Cantwell, Shawano.
Sheboygan	H. C. Reich, Sheboygan.	T. J. Gunther, Sheboygan.
St. Croix	B. Kunny, Baldwin.	O. H. Epley, New Richmond.
Trempealeau-Jackson-Buffalo	Wm. Bellitz, Cochrane.	C. F. Peterson, Independence.
Vernon	J. K. Schreiner, Westby.	F. E. Morley, Viroqua.
Walworth	M. D. Cottingham, Lake Geneva.	E. Kinne, Viroqua.
Washington	H. F. Weher, Newburg.	A. H. Heldner, West Bend.
Waukesha	G. E. Peterson, Waukesha.	S. B. Ackley, Oconomowoc.
Waupaca	Fremont Chandler, Waupaca.	G. T. Dawley, New London.
Winnebago	J. W. Lockhart, Oshkosh.	E. A. Hunt, Oshkosh.
Wood	Ed. Hougen, Grand Rapids.	W. M. Ruckle, Grand Rapids.

SOCIETY PROCEEDINGS

OUTAGAMIE COUNTY.

The Outagamie County Medical Society of Appleton went on record as favoring the establishment of a welfare station in this city, at the meeting of the Y. M. C. A. Dr. E. H. Brooks gave a talk on "The Eye and Its Relation to Constitutional Diseases," and Dr. A. E. Rector gave a talk on the County Council of Defense.

DANE COUNTY MEDICAL SOCIETY

At the monthly meeting of the Dane County Medical Society Dr. Hugh Payne Greely, a new physician in Madison, read a paper on "The Use of Methods of Precision in Medicine." Dr. Greely comes to Madison from the Still Rock Spa at Waukesha.

OSHKOSH MEDICAL CLUB.

An address on "Chest Tuberculosis" was given before the Oshkosh Medical Club by Dr. Frank Brockway. He related some of his experiences at the tuberculosis sanatorium at Wales, Wis. O. E. Bohn of Philadelphia gave a brief talk on "Collections".

INTERURBAN ACADEMY OF MEDICINE.

Dr. W. R. Bagley of Duluth, Minn., was the principal speaker at the meeting and banquet of the Interurban Medical Society held at the Hotel Superior, Superior, Wis.

FOX RIVER VALLEY MEDICAL SOCIETY.

The annual meeting of the Fox River Valley Medical Society was held at Green Bay, February 20.

NEWS ITEMS AND PERSONALS.

DR. DEXTER H. WITTE, formerly newspaper man and house physician at the county hospital, has reported for duty at Camp Greenleaf, Fort Oglethorpe, Ga. He has obtained a commission as first lieutenant in the medical reserve corps.

FIRST LIEUT. MICHAEL J. TROCK, 126th Ambulance Corps, Thirty-second Division, has arrived safely overseas.

LIEUT. DR. A. E. GENDRON, who for some months past has been stationed at the Base Hospital at Camp Hancock, Augusta, Ga., has received the appointment as chief authority on tuberculosis

at the above named camp. He was formerly of River Falls, Wis.

FIRST LIEUT. W. C. BECKER, M. D., of Watertown, has returned from France, where he saw active service.

DR. E. G. LINKMAN, Milwaukee, has been notified by Washington officials that he is appointed to a first lieutenantcy in the medical reserve corps, and is subject to a 48-hour notice.

DR. R. S. ELLIOTT of Laona, Wis., has given up his hospital to enter the service. He is now a member of the base hospital stationed at Camp Pike, Ark., with the rank of captain.

DR. WILLIAM H. HECKER of Beloit, has been ordered to report at Ft. Oglethorpe, Ga., where he will take up active duty in the X-ray Division of the Medical Corps.

DR. C. W. WILKOWSKE of Chippewa Falls, has been ordered to report at Ft. Riley, Kansas, to enter upon his duties as captain of a medical corps in the army hospital there.

DR. G. W. FIFIELD of Janesville, has been ordered to be ready to enter active service on April 3.

Dr. E. W. Bowen, who enlisted in the reserve officers' medical corps some weeks ago, will report for active duty at the base hospital at Camp Grant, Rockford. Before coming to Watertown, Dr. Bowen was on the staff of the state sanatorium at Wales, and before that on the staff of the Milwaukee county hospital.

DR. JAMES P. DEAN of Madison, former famous football star, has arrived in France with the Lorenz unit.

DR. MYERS of Deerfield, was recently retired from army service on account of physical disability. He will take up his practice again at Cottage Grove.

LIEUT. L. H. MOORE, a practicing physician of Appleton, has been appointed to take a special medical course at the Rockefeller Institute in New York.

CAPT. ARTHUR A. MITTEN and his ambulance company, the 125th, have arrived safely in France, according to word received in Milwaukee.

DR. S. R. MITCHELL, Milwaukee, has been appointed to a first lieutenancy in the medical officers' reserve corps, according to an announcement made at Washington on Wednesday by Maj. Gen. McCain.

MAJOR G. I. HOGUE, formerly of Milwaukee, has been appointed Chief of the department, Vision of the Eye, at the Base Hospital, Camp McClellan, Anniston, Ala.

Vacancies left by the seven members of the Milwaukee Base Hospital No. 22, who were transferred to Fort Sheridan, Friday, must be filled within the next few days, Quartermaster L. Dennison announced Saturday.

Phi Rho Sigma medical fraternity tendered a farewell banquet to members attached to Milwaukee base hospital No. 22, at the Plankinton hotel March 18.

Wood pulp in place of cotton for absorbent irrigation pads is now used by the surgical dressing department of the Milwaukee chapter of the Red Cross.

The first woman physician to be appointed in a Milwaukee city controlled hospital, Dr. Eleanore Cushing, assumed her duties on Friday, March 15, as resident physician of the South View hospital and assistant to Dr. Schiller. She will have charge of all the contagious diseases in the city.

"Wisconsin ranks second in the states of the union in the percentage of medical men furnished for war service since the country entered hostilities against Germany," said Dr. Rock Sleyster, of Wau-pun in addressing members of the Brown-Kewau-nee County Medical society at Green Bay. The total number of physicians in active practice in Wisconsin before the war was 2,300, and 400 have gone into the nation's service.

A new hospital for the county was recommended unanimously by the joint committee on finance and county and state institutions of the county board.

The zone in which the committee recommended that the new hospital be built is bounded by Walnut, Mineral, Ninth and Twenty-seventh streets.

Within a year the new infirmary and the Cornelia Bradley Memorial hospital, the first buildings of the proposed medical school group of the university, will be ready for occupation. The plans have been approved by the regents and the construction will begin soon.

A. H. Schubert has been appointed manager of Marquette University's campaign to raise \$1,000,000 for the school of medicine. One-third of the amount has been donated by the Carnegie Foundation, providing Marquette raises the remainder.

The Milwaukee Children's Hospital association has closed its twenty-fourth year of service with more than \$300,000 on hand for the erection of a new building.

Pneumonia was the largest death agent in the state in January. Three hundred and four deaths for this malady were reported. The next highest mortality was from cancer, 142, and pulmonary tuberculosis was third with 140.

Licenses are being issued by the United States government for the manufacture of a substitute for salvarsan under restrictions which will protect it from charges of infringement on the German patent, according to a bulletin issue by Dr. H. E. Dearholt, director of the health instruction bureau.

A letter has been received at Antigo from Lieut. G. L. Bellis telling of his valuable experience in France. He is Commanding Officer of a tuberculosis hospital which he helped to organize and equip.

DR. EDWIN DOCKERY of Green Bay, assistant surgeon in the navy has been promoted from junior lieutenant to senior lieutenant in the medical corps. He was transferred from the Naval Medical school in Washington to the large marine training camp in Quantico, Va.

MAJOR L. A. MOORE, Monroe, Wis., of the medical corps of the 128th infantry, has arrived safely in France.

DR. ALBERT E. WILLIAMS of Eau Claire, who received the commission of lieutenant in the medical reserve several months ago, has left for Fort Riley, Kansas, where he will take training the next few months.

DR. R. M. NELSON of Horicon, has received a call to report at Fort Riley, Kans., for service in the medical corps.

DR. GEORGE D. WHITESIDE of Plover, Portage county's representative in the Wisconsin Assembly, is leaving for France to take a responsible position with the Red Cross.

DR. E. GATES, Two Harbors, Wis., has left to enter the service of Uncle Sam.

TWENTY-THREE practising dentists and students were enlisted in the medical reserve corps at the Milwaukee army recruiting office March 23, and are awaiting a call to service.

DR. LAWRENCE G. SYKES, assistant medical director of the Northwestern Mutual Life Insurance Co., has left for Camp Grant, Rockford, Ill., where he has been assigned by the surgeon general of the army as special heart examiner.

DR. E. A. RILEY of Park Falls, who has a Lieutenant's commission in the Medical Corps of the U. S. Army, has been ordered to report for duty.

DR. JEREMIAH DONAVAN has gone to the East to be associated for two months with Dr. Grant in the study of diseases of the rectum.

DR. E. H. FEDERMAN of Montello, Wis., who has been commissioned first lieutenant, is in training at Fort Riley, and has secured a physician, Dr. E. J. Campbell to act as locum teneus during his absence.

MISS ETHEL RUFF, for five years connected with Dr. Edward's sanatorium, Napierville, Ill., has been appointed superintendent of nurses in Muirdale Tuberculosis Sanatorium, Wauwatosa. She succeeds Miss Frances Heinrich, who left for Houston, Tex., with the Augustana hospital unit, for war service. Miss Elizabeth Leenhouts, who

has had charge of the out-patient department since the institution started, has been called to service with the Milwaukee base hospital unit. She will continue with her work in Muirdale until the unit receives word to leave Milwaukee.

THE WISCONSIN ANTI-TUBERCULOSIS ASSOCIATION is co-operating with the Red Cross and other organizations to provide for Wisconsin men sent home from army camps on account of tuberculosis.

DEATHS

Dr. A. W. Slaughter of Green Bay, died suddenly March 18, of heart failure at the age of 57 years.

Dr. A. J. Cox, prominent physician of Superior, died March 13.

Dr. Chas. Gough passed away at the hospital of St. Mary's in the city of Wausau, on Feb. 10. He was a graduate of Marquette University, practicing at Shullsburg for two years before he located in Wausau.

Miss Gertrude Isermann, superintendent of the Hanover hospital for the past several years, died March 21, following an illness of a month. Miss Isermann has been a nurse in Milwaukee for the last fifteen years.

Dr. A. C. Fraser formerly of Manitowoc, died at Pasadena, Cal., March 6.

BOOK REVIEWS

ELEMENTS OF HYGIENE AND PUBLIC HEALTH. A text-book for students and practitioners of Medicine by Charles Porter, M. D., B. Sc., M. R. C. P. (Edin.) of the Middle Temple, Barrister-at-law, Medical Officers of Health, Metropolitan Borough of St. Marylebone; Examiner in Public Health, University of Edinburgh; Member of Board of Examiners, Royal Sanitary Institute and Sanitary Inspectors' Examination Board; formerly Tutor in Public Health, St. Bartholomew's Hospital, etc., author of "Sanitary Law and Practice" (with Dr. William Robertson) "School Hygiene and the Laws of Health;" "Sanitary Law," etc., with 98 illustrations. Henry Frowde, Oxford University Press, Lodder & Stoughton, Warwick Square, E. C., London. 1917. Price, \$4.15.

This small book on "Hygiene and Public Health" is written by an English physician and naturally is not as valuable for the American physician as would be a book written by an American. His statistics and recommen-

dations are all taken from the English local government board, and there is some variation between their practices and the American practices. However, the book covers very fully the elements of the subject of Hygiene and Public Health, contains numerous figures illustrating various sorts of apparatus, methods of house and factory sanitation, and contains chapters also on animal parasites, climate and meteorology, occupational diseases. Naturally the size of the book does not lend itself to a complete exposition of the subject, but it should be very valuable as a preliminary reading for students of Medicine and for those physicians who have paid only too little attention to the question of public health and sanitation.

TUMORS OF THE NERVUS ACUSTICUS AND SYNDROME OF THE CEREBELLOPONTILE ANGLE. By Harvey Cushing, M. D., Professor of Surgery at Harvard University. Octavo of 296 pages with 262 illustrations. W. B. Saunders Company, Philadelphia and London, 1917. Cloth, \$5.00 net.

The Neurological Surgeon is one of the last combinations in specialization. Only a few really can claim that title and Dr. Cushing is not only one of the few, but probably no surgeon in America has been more influential in carving out this specialty than he.

The monograph before us now, Tumors of the Nervus Acusticus, is a model for all time. As a matter of fact, Dr. Cushing set his model earlier in his monograph on Disorders of the Pituitary Body. The two books are quite similar in the general arrangement.

This present monograph is based on the intensive study of 30 verified cases of tumor of the acoustic nerve and 3 cases of unverified tumor. All these case histories are given in their essentials and commented upon. Under Diagnosis are included case histories of three patients who had tumors in the cerebellopontile angle, not connected with the acoustic nerve but with symptoms resembling those due to acoustic nerve tumors.

After a short but careful historical review, the author has a brief chapter on Clinical Statistics and then plunges into the analysis of the 30 cases. He takes up Etiology, Pathology, Symptomatology, Diagnosis, Differential Diagnosis, Treatment and the Technic of his suboccipital decompression operation.

The book is intensely interesting albeit difficult reading as all such books founded on long case histories must be. It is a valuable addition to the literature and is the best book known to the Reviewer on this important branch of Neurological Surgery.

The illustrations, of which there are many, are well reproduced and serve to amplify the text.

Altogether it is a monograph to be highly recommended to the attention of the profession.

A PRACTICAL TEXT-BOOK OF INFECTION, IMMUNITY AND SPECIFIC THERAPY with special reference to immunologic technic. By John A. Kolmer, M. D., Dr. P. H., M. Sc., Assistant Professor of Experimental Pathology, University of Pennsylvania, with an introduction by Allen J. Smith, M. D., Professor of Pathology, University of Penn-

sylvania. Second Edition Thoroughly Revised. Octavo of 978 pages with 147 original illustrations, 46 in colors. W. B. Saunders Company, Philadelphia and London, 1917. Cloth, \$7.00 net; Half Morocco, \$8.50.

We had the pleasure of reviewing the first edition of Dr. Kolmer's book on Infection, Immunity and Specific Therapy. The second edition is before us. We exhausted our stock of encomiums on the first edition. We can only repeat what we said then. This is to our mind the most lucid, clear-cut, comprehensive book which we have seen on these rather complicated and controversial subjects.

In the second edition the arrangement has not been changed, but much new material has been added including Dr. Kolmer's and his associates' work on salvarsan toxicity, the quantitative Wassermann reaction, etc. Lange's colloidal gold reaction is found described. The recent methods of determining pneumococcus groups, the Schick test for immunity in diphtheria, blood transfusion, and other methods recently devised are found well described and illustrated.

The whole book of 945 pages is divided into five parts.

Part I, General Immunologic Technic; Part II, Principles of Infection; Part III, Principles of Immunity and Special Immunologic Technic; Part IV, Applied Immunity in the Prophylaxis, Diagnosis and Treatment of Disease, Specific Therapy; Part V, Experimental Infection and Immunity. The last part consists of sixty exercises for students covering all the work in Immunology and Specific Therapy and based on the text of the book. This section is a complete laboratory guide.

The numerous illustrations are well executed and reproduced. They aim to amplify the text. They fulfil that purpose.

Every laboratory should have this book on its shelves and every laboratory worker and modern physician should have it within easy reach.

AMERICAN ILLUSTRATED MEDICAL DICTIONARY (Dorland). A new and complete Dictionary of terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, Veterinary Science, Nursing, Biology, and kindred branches; with new and elaborate tables. Ninth Edition Revised and Enlarged. Edited by W. A. Newman Dorland, M. D. Large octavo of 1179 pages with 331 illustrations. 119 in colors. Containing over 2,000 new terms. W. B. Saunders Company, Philadelphia and London, 1917. Flexible Leather, \$5.00 net; thumb index, \$5.50 net.

Dorland's Dictionary is unique. It is always welcome, for it is satisfying to find between its comprehensive pages just what is sought. The new 9th edition is better than any of the other eight editions, because it keeps pace with the rapidly changing times and includes the latest new words which a hectic world is now spluttering forth in an attempt to make the words fit three languages without translation.

The same flexible cover, the same thin pages, the same old friend ever young. We don't want to think of the time when we shall not see its advent. Gentle Reader, have you a Medical Dictionary? No? Then be sure you ask for Dorland's and specify new 9th edition. You will be pleased with it.

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L. W. DUDLEY, M. D., Resident Physician

THERAPEUTIC NOTES

ASCENDENCY OF THE AMPOULE.

As evidence of the favor with which the medical profession has come to regard the glaseptic ampoule, it is worthy of note that **Parke, Davis & Co.** now supply in this form more than eighty sterilized solutions for hypodermic use. The fact is significant when it is remembered that the "ready-to-use" solution is distinctly a modern institution, having its introduction in this country less than ten years ago.

Solutions in ampoules, it is obvious, have several advantages over those prepared in the ordinary way. They are ready for immediate use, any time, anywhere, there being no necessity to wait until water can be sterilized and cooled. Accuracy of dose is insured, each ampoule containing a definite quantity of medicament. The solutions are aseptic; they are permanent.

Parke, Davis & Co. publish an "Ampoules" brochure, a valuable little book of seventy pages, giving a list of their sterilized solutions, with therapeutic suggestions, dosage, descriptions of packages, prices, etc. The work contains a useful therapeutic index and an informing chapter on hypodermic medication in general. Physicians and surgeons are advised to send to the Detroit laboratories of **Parke, Davis & Co.** for a copy of the book, requests for which are invited.

A SAFE ANTISEPTIC.

In view of the numerous reports of death and disaster following the use of bichloride of mercury and carbolic acid, it is a good thing to know that there is now available a germicidal agent which is even more efficient than these dangerous antiseptics, and which is safe. The medical profession owes much to the genius of Dr. H. D. Dakin, who has recently brought to its attention the great value of the chlorine-carrying compounds.

The most convenient of the antiseptics which he has introduced is para-toluene-sodium-sulphochloramide, best known in this country under the name of "**Chlorazene.**" In Dakin and Dunham's "Handbook of Antiseptics," we learn that this antiseptic is more powerful, when tested on blood-serum-muscle-extract cultures of the staphylococcus aureus, than mercuric chloride, silver nitrate, argyrol, zinc chloride, hydrogen peroxide, phenol, and other common antiseptics. In fact, a 2 per cent solution of this antiseptic will accomplish in five minutes what it requires 24 hours to accomplish with a 1:1000 solution of mercuric chloride.

The most gratifying fact of all is that the Chlorazene is safe. There is little or no danger of poisoning. Some of the uses of Chlorazene are as follows:

As a gargle or spray, in all forms of Sore Throat, and as a therapeutic and prophylactic agent in diphtheria, meningitis, measles, scarlet fever, tonsillitis, etc.

In Skin Diseases. Eczema, acne, carbuncles, boils, paronychia, felons, and other common skin infections.

In Wounds. Chlorazene may be used as a wash to infected areas, as an irrigant, on compresses, as a dusting powder (Chlorazene Surgical Powder), and as a paste (Chlorazene Surgical Cream).

In Genitourinary Diseases. As an application to venereal sores (chancre and chancroid), as an injection in the treatment of gonorrhoeal urethritis and gonorrhoeal vaginitis.

In Obstetrics. Following delivery and to clean out the uterus in cases of sepsis. As a cleansing agent and deodorant in practically all diseases of women.

In Cancer and Malignant Sores as a deodorant and germicide.

Samples of Chlorazene will be sent without charge to any physician, dentist, veterinarian or druggist in any part of the country applying to the home office of The Abbott Laboratories, Chicago. Complete literature of Chlorazene, Dichloramine-T, Chlorosane, and other Dakin preparations, will be included.

BOOKS RECEIVED

DISEASES OF THE DIGESTIVE ORGANS with special reference to their diagnosis and treatment by Charles D. Aaron, Sc. D., M. D., professor of Gastroenterology in the Detroit College of Medicine and Surgery; consulting Gastroenterologist to Harper Hospital. Second edition, thoroughly revised. Illustrated with 156 engravings, 48 roentgenograms and 9 colored plates. Lea & Febiger. Philadelphia and New York, 1918. Price, \$7.00.

A CLINICAL MANUAL OF MENTAL DISEASES. by Francis X. Dercum, A. M., M. D., Ph. D., Professor of Nervous and Mental Diseases, Jefferson Medical College, Philadelphia; Consulting Neurologist to the Philadelphia General Hospital; Ex-President of the American Neurological Association, of the Philadelphia Neurological Society, and of the Philadelphia Psychiatric Society; Foreign Corresponding Member of the Neurological Society of Paris, and of the Psychiatric and Neurological Society of Vienna; Member of the Royal Medical Society of Budapest, etc., etc. Second Edition, Revised. Philadelphia and London. W. B. Saunders Company, 1917. Price Cloth, \$3.50 net.

POSTGRADUATE MEDICINE PREVENTION AND TREATMENT OF DISEASE. By Augustus Caille, M. D., F. A. C. P. Member of the American Medical Association; Fellow of the New York Academy of Medicine; Fellow of the American Congress of Internal Medicine. Member and Ex-President of the American Pediatric Society; Emeritus Professor of Medicine and Consultant to Department of Pediatrics, New York Post-Graduate Medical School and Hospital; Visiting Physician to the German Hospital; Consulting Physician to Isabella Home and Hospital and Sea Cliff Convalescent Home, etc. Profusely illustrated. New York and London. D. Appleton and Company, 1918.

The Wisconsin Medical Journal

Volume XVI

MILWAUKEE, MAY, 1918

Number 12

ORIGINAL ARTICLES

SOCIAL MEDICINE IN THE INDUSTRIES.*

BY CHARLES H. LEMON, M. D.,

CHIEF SURGEON, THE MILWAUKEE ELECTRIC RAILWAY &
LIGHT CO.

MILWAUKEE.

Any proposed legislation which in its operation would interfere with the timeworn relation of physician and patient, is certain to meet with some opposition from a conservative body of physicians. No other profession enjoys such a close intimacy, and because of this very confidential relation, any legislation which would tend to limit that relation would sacrifice in part at least one of the most cherished ideals of our profession. We cannot think of social medicine, established by the State as a matter of law, in any other than a business relation. It was with some misgivings therefore as to how the relation of physician and patient could be met, that I was persuaded to enter heartily into the scheme of a public service corporation undertaking to treat medically and surgically its employes, as part of the welfare work of the Company.

In addressing you at this time I have five years of experience with social medicine as applied to the industries behind me. Some of the problems which at first appeared insuperable to me, later experience demonstrated to be entirely practical. With the gradual evolution of the plan, aided by an executive of more than usual ability and a staff such as is found only in a successfully operated corporation, the details, which have made the plan feasible, were successfully worked out, and I can say at the beginning of this address, social medicine in the industries is not only entirely practical, but it is highly desirable.

It is to be borne in mind that in introducing social medicine as part of the welfare work of a

large public service corporation, the plan was worked out without the complications necessarily interjected by politics; and without opposition on the part of the medical profession. It was a unit plan and no considerations were given any weight; excepting those which affected the welfare of the employes; and the employes themselves were consulted before the various steps in the development of the plan were undertaken.

A year ago this society by a unanimous vote approved of the plan of Social Insurance in principle. During the year that has elapsed, as was to be expected, opposition to it has developed. This opposition however, to any proposed legislation along these lines, is to my way of thinking more acceptable than the radical, theoretical, impractical and objectionable support of it, on the part of the self-organized and self-constituted committee for labor legislation in New York City, which insists before discussing the question with you at all, of pulling you into their barrel and making you look at the whole question through their bung-hole.

I do not object either to criticism or opposition on the part of the medical profession, to the plan of social insurance. I think that we all will be biased more or less in our discussion of the matter, by our viewpoint; modified necessarily by the relation we have or may have to the whole scheme. The plan adopted by the Milwaukee Electric Railway & Light Company, and gradually modified and expanded during five years is a composite scheme representing both medical and lay thinking. This plan may not appeal to you, but it is submitted at the request of the Program Committee, because some features of general interest have been worked out and some statistics made available, which may assist in the study of social insurance to be applied on a large plan. It is in the hope that this data may be of some service, that the writer consented to discuss this question at this time.

Our activities cover of course the entire activities of the Company, and its subsidiary and controlled Companies. It, therefore, is not limited to the City of Milwaukee, but it covers the smaller towns

*Read at the 71st Annual Meeting of the State Medical Society of Wisconsin, Oct. 3-5, 1917.

to the West and South including a radius of about fifty miles. In discussing the plan, however, I shall, excepting in the statistical data, ask you to consider it as applying to the City of Milwaukee only, because the plan will be more easily understood. In a city of nearly 500,000 inhabitants, we have approximately 4,000 employes. Of this number 3,000 are members of the association, which is known as the Employes Mutual Benefit Association. Membership is not compulsory but voluntary. At the inception of the plan, everyone was invited to become a member, irrespective of his age, length of service with the Company or his physical condition. All were admitted without medical examination. Objectors, however, to the plan among the employes were found. At the end of four years, when because of age limit these objectors, some of whom had been with the company more than twenty years and could not then be admitted because of age limit or physical infirmity, a medical examination being then required, appreciated what they had lost when the full development of the plan showed its great advantages to them. The first point I would make, therefore, is that membership in the social insurance feature of the company's work, is entirely voluntary.

The Company has a central office building in the heart of the city and four large car stations at the four points of the compass, radiating from this office building as a center, as well as large car shops, so that the Northeast section of the city forms one district; the Northwest another; the Southeast another and the Southwest the fourth. A physician having a private practice in each of these district was selected to care for the E. M. B. A. members in that district. At each of the car stations as well as the shops in these four districts, physicians, offices were provided with medicines and consulting rooms, so that the men coming to their work or leaving their work could easily obtain medical relief.

It was found that this centralization of the work of the various districts was advantageous to the employes and physicians, as many having slight illnesses availed themselves of the services of these physicians; whereas, when it was necessary to go to the physicians' offices for treatment, so much time was lost, or the regular private office hours of the physicians were so illy adapted to the routine of the company's business, that the men

could not avail themselves of their services when they were off duty. In this day of preventive medicine when every avenue of infection is sought out before it leads to disease, no argument is needed in favor of any plan which makes the services of the doctor available to a large group of men at a given point. Under the plan adopted the employe was required to consult the physician in his own district. It will be seen, therefore, that the second feature of our work, in fact eliminated free choice of a physician. The member was under no obligation to seek the services of the doctor, if for any personal reason he did not care to go to him. On the other hand he did not have the privilege of calling on a doctor in another district, but he always had the privilege of consulting the Chief Surgeon of the Company or his first Assistant, at the central office building.

Experience has shown that every physician, however well trained he may be, is not adapted to the plan of group service of this character. Some men are not good mixers; others are lacking in tact or show little or no interest in the success of the work and are apparently only interested in the fees they may derive therefrom. During the five years of our experience therefore, changes have occurred in the personnel and with the growth of the work, new alignments of districts have necessarily been made. The matter of free choice of physician is one of the great obstacles that any plan of social insurance is going to meet. The inalienable right of the patient to select his own physician will be fought for. I predict, basing my thought upon my experience, that the free choice of physician will never give the best results in any group plan of insurance. The men who elect to do this work will of necessity be selected, because of their fitness, or adaptability to the needs of the work, and many, after a short experience with it, will undoubtedly abandon it, because it will be distasteful to them.

The entire time for this paper could be consumed by arguments favoring my position. I will epitomize my remarks by saying that economic distribution of milk which is a common necessity in a great city, has demonstrated everywhere that one large company alone can economically distribute milk, and the only way that social medicine can be economically administered, to my way of thinking, is to concentrate the work of the men who are doing it to a given district, so that this

wasteful automobile riding that we are all engaged in under the present conditions of the practice of medicine and surgery, will be eliminated.

In providing that in every case of serious illness, a consultant shall be called, the well being of the employe is sufficiently conserved. While the services of the Chief Surgeon and his first Assistant are always at the call of the association physicians for consultation; the association physicians are instructed to encourage consultations by other than the company's surgeons or physicians, wherever the sick employe expresses a desire for a particular physician and is willing to pay for his services.

Further, in case of sickness the association physician does not go to the case unless called for by the employe. In this way through five years, the employe has gradually come to elect to choose the physician employed by the association without expense to himself, rather than another physician for whose services he would be obliged to pay. I have been very strict in my adherence to this practice, as I did not care in any way to antagonize any one or even a large body of the profession, by insisting upon an attendance which might prove personally objectionable or that might give to our medical supervision the suggestion of espionage. It is to the credit of the large body of practicing physicians in Milwaukee, that in many instances, where their services were sought by those who could avail themselves of our free medical attendance they have advised our employes to accept the services of the physicians and surgeons of their association. On the other hand, employes have not infrequently insisted on these services by those whom they have thus consulted and in some instances have even paid considerable fees for operations of an average character, rather than have these operations performed by the Company's surgeons. This may persuade you that no effort was made to coerce an employe into a plan of action which he might consider an infringement of his personal rights. As far as I am able to judge by the statistics of our work, which I will submit in tabulated form for your analysis in the published paper, I think I am justified in saying that each year there is an increasing number of employes, who are entirely satisfied with our services.

The financing of a large undertaking of this character is a problem not easily solved, because there is so little data on which to base adequate compensation, and with our association, it was of

course largely a matter of speculation. Many factors enter into the problem, not the least of which are the overhead charges, incident to the employment of a Welfare Secretary, who has general charge of the work outside of the strictly medical work; the providing for weekly indemnities to make good the loss of wage incident to sickness; the providing of a death benefit that would be adequate to meet the large expenses that are inevitable even for a laboring man; the providing of medicines, which experience shows, are not purchased at the drug stores on prescriptions for minor ailments, and if not dispensed are not taken at all; the fitting up of proper offices, rest rooms, libraries and a thousand and one other activities, all of which are incidental, but which make a comprehensive whole.

Statistics of the Bureau of Commerce and Labor of the United States, show that the average days disability for workmen in the United States is nine days per man per year. On any group plan of social medicine which provides payment of sick benefits for lost time, the average loss of nine days is a broad estimate, as shown by the experience of our association. Fifty cents a month is a small sum comparatively for workmen to pay for medical attendance with all that goes with it, under a social plan of medical insurance. It was estimated, however, that this sum, which is \$6.00 per year per member, added to an additional \$6.00 per year per member, which the Company would contribute, would adequately care for the expenses of the association.

In the whole matter of the financing of the association, you can readily see how entirely experimental it was. The work as far as the medical end of it is concerned, got under full swing in the year 1915, when the offices were provided at the various car stations and shops where the physicians were readily available, and the year 1916 which is the first year under which the medical benefit was extended to the wives and dependents, is the first year in which we have statistics covering the entire group.

Those of you who are interested in the study of preventive medicine will be interested to learn that immediately upon the centralizing of the work of the physicians, there was a noticeable decrease in the average days disability. The statistics for the year 1915 shows that in the fourth year of our experience the average days disability for all em-

ployees who were members of the association, had been reduced to $4\frac{1}{2}$ days per man per year. As a result of this efficient work of the Medical Department thousands of lost days time was saved and the association had built up a reserve amounting to nearly \$50,000. This remarkable result is the combined result of the work of our entire staff and the credit for its achievement is equally divided among the staff. The observation of our Welfare Secretary and Visiting Nurse at this time called attention to the fact that a great need existed of in some way extending the benefits enjoyed by the bread winner and employe, to the wives and dependents. It was found frequently that the wife and children were in need of medical attention and because of the expense, they refrained from calling in a physician. Much suffering resulted even in the families of well paid employes. The question as to how this should be met had frequently been discussed prior to this time. Personally I had urged that the services of the company surgeon, which up to this time had been given gratuitously to the members of the association by the Company, should be given to the wives, many of whom, information had come to me, were in need of operations to restore them to health, but because of the large expense that would necessarily be incurred, these operations could not be taken care of with the income that was available.

Mr. J. D. Mortimer, President of the Company, in discussing this matter with me, finally said, "I have been convinced for a long time that something should be done for the wives and dependents of the members of the association. The thought occurs to me that the married man is less able to contribute further from his earnings to provide for this care than the unmarried man. The amount of reserve that we have accumulated thus far, will bring sufficient revenue from interest bearing securities, to warrant us in setting additional funds aside, sufficient to provide additional physicians, so that we may give complete medical and surgical services to our employes, their wives and dependents under eighteen years of age, believing as I do, that the standard established by the Medical Department will be maintained and that the reserve will continue to grow, although more slowly." This suggestion was brought to the attention of the Directors of the Association, thirteen of whom represent the employes and eleven the Company, and it was of course accepted, and on Jan. 1, 1916, put into effect.

It may be interesting to note the basis on which the compensation for physicians' services other than the surgeons were made. It was my desire to have this work so concentrated, that the physician in charge of a district could make his calls expeditiously without great loss of time in going from one place to another, on the theory, that the office practice is a far more profitable side of our business than the calls we make on the outside, because they are concentrated and no time is lost between the exit of one patient and the entrance of another. A unit basis, therefore was adopted. It was estimated by our accountants that a fee of \$1.50 per year per member prior to 1916 would fairly compensate a physician doing this work in a restricted district on the group plan. This gave a unit basis of $12\frac{1}{2}$ c per month per member. When we came to consider the question of the compensation for attendance on the wives and dependents; the wives were made a unit and the children or the dependents of the family were considered together as a unit, so that we had three units;— The employe; his wife, and the children or dependents. As the wives, and children as a unit, together with the employe would make a large number of people who would be concentrated in a given district, it was estimated that a unit basis of 10c per month for each wife and 10c per month for the dependents as a unit, would make a fair compensation. This unit, therefore, was arbitrarily adopted, so that for a family consisting of a husband, who is a member, his wife and children, the physician in that district would receive in payment for group service \$3.90 per year. I will show you later some tabulated statistics, showing the number of house calls made in each case; the number of office calls; and in each case will show you the monthly compensation paid to the men in each district; and after five years experience with this plan on the unit basis, I am still satisfied that it is a fair remuneration. These statistics show that the employe himself comes frequently to the doctor's office while he is seldom sick at home. With reference to the families, it shows exactly the reverse, and for obvious reasons. Beginning with the year 1916 when the wives and dependents were included in the surgical services, a special assistant surgeon had to be provided whose services are paid by the association. I have taken the year 1916 as a basis for illustration, because first, it was the first year under which this general plan became effective and for the further reason

that we have available statistics covering the activities for that year. These statistics will bear a very close investigation, and from various angles I have no doubt data derived from them, may be of benefit to the Committee having the question of social insurance in hand, as well as to the large body of the profession, who are no doubt interested in this subject and who will have an opportunity of comparing the statistics with their own personal experience. I have been a corporation man for so many years that I may perhaps be biased in saying, that I believe in corporation management, because the management of a large growing concern must be not only economical in its various units, but it must be at the same time highly effective. I realize also at the outset, having had many years of general practice before I limited myself to the general practice of surgery, that unless the administration of this work was surrounded by definite rules, that no one could be persuaded to undertake it; and one of the first rules that was made for the association, was that the calls for the physicians to go to the house, must come through either the Chief Surgeon's office or the Superintendent's office having direct charge of the man; that all morning calls must be put in not later than 9 A. M.; that all afternoon calls must come in not later than 5 P. M., and that no evening or night calls would be made, excepting for emergency cases. In order to make these rules effective, they were brought to the attention of the Board of Directors of the Association; were passed by them and became effective. It is a splendid comment upon the discipline of our Company, when I tell you that the instances where these rules have been violated, are so few as to hardly deserve mention. In this way lost motion has been prevented and the physicians who are employed by the association have abundant time to attend to their private practice.

Obstetrics was eliminated because it would interfere with the regular routine duties, and it was not deemed advisable by the Board of Directors to include these services. Excepting at the Public Service Bldg., the office building of the Company, no office hours are held in the afternoons and no office hours at any place for more than one hour. There are no evening office hours. The large number of calls that come are morning calls, and by education we have persuaded our members and their families to defer troubling the doctor dur-

ing the late hours of the afternoon and evening for minor ailments which can just as efficiently be cared for during the regular work on the following morning, and I think something has been accomplished when I call attention to this fact. You may be surprised when I tell you that the Medical Staff of the Association is caring for 10,000 people; 3,000 of whom our census shows, are children. Some idea of the immense amount of clerical work that is undertaken by the Accounting Department of the Company may be had when I state that a monthly census is made of all employes, so that the physicians may be paid exactly each month for the number of units in their district. Many of the statistics, which I will include in the paper, but will not take time to discuss, require an enormous amount of work and I will personally vouch for their accuracy. The fact that these statistics were available and their accuracy could be vouched for, was the probable reason why the President of your Association urged me to read a paper on our work at this meeting. Doctors are known to be very careless in the keeping of records. We keep a card system for every case and on it is recorded everything connected with the activity of the doctor: his diagnosis as well as his treatment, and this data is laboriously transcribed to a large card in our Accounting Department; I am therefore, responsible in a measure for the orderly keeping of records by the assistants, as well as by myself in our Medical Department. In a paper read one year ago before the American Medical Association, the other features of our work were discussed and I was surprised and gratified at the favorable notice the activities of our association received from many unthought of quarters.

In bringing this matter to your attention, I have endeavored to discuss only those features which are of interest to the physician and which may have a bearing upon the question of general social medicine. In our case we do not limit our medical services to men earning \$100.00 or less, because a large number of our men earn more than \$100.00 a month, and it has proven most gratifying to the Medical Department that the services of the department have been sought for, not only by the rank and file of our membership, but by the men also higher up. The centralization of authority in the Chief Surgeon of the company makes him responsible for the general welfare of the company, and I will say that at all times I have en-

deavored to encourage the young men who are working under me to seek advice when difficult cases present themselves, and I have no tolerance whatever for the opinions or actions of any subordinate, who would fail to ask for consultation and assistance in a case of grave illness that he was confronted with. In this way I have kept myself fully informed at all times of the general health of the employes and their families.

If social insurance becomes a fact and it is administered through the central authority of the County Medical Societies, I predict that it will not only be a success from its inception, but it will do untold good to many, at present helpless and unprovided for women and children. With its adoption, the medical profession as a whole will be benefited, and many a man who today in our cities is eeking out a miserable livelihood, trying to practice medicine and trying harder to collect his bills, will receive compensation that will be an adequate return for his skillful services.

An analysis of the medical work done in districts one, two and three is shown by months and the sum paid the physicians who have charge of these districts is also shown by months. It will be noted in the case of district No. 3 that the office calls very greatly exceed that in any other district. This is due to the fact that all office calls made at the Chief Surgeon's office are credited to district No. 3. The office calls, therefore, of this district should be divided by three to reach the proper average of the number of office cases treated by each of these physicians.

The totals herein shown are taken from the Fifth Annual Report of the E. M. B. A. They are attached without comment as they will be used in many different ways by investigators. Much valuable data is herewith submitted that is not otherwise available.

(The Journal regrets space will not allow of publishing all tabulated data from the Fifth Annual Report of the E. M. B. A. These may be had by request from the author.)

DISCUSSION.

MR. BERT HALL, Milwaukee: Mr. President, Ladies and Gentlemen: As the Social Secretary of the Welfare Association of the Company, it is my privilege to be in very close and intimate touch with the families of our employes, visiting them whenever they are sick, and keeping in touch with them through a large Visiting Committee of our Association, and I know something not only of the material and physical benefits which our doctors have brought to our employes and their families,

but also something of the spiritual benefits they enjoy, and which, to my mind, weigh even more than the material benefits. I refer to the spirit of brotherhood that has developed and is flourishing in our association. This is shown not only in the attitude of the men toward each other, but in their attitude toward the company and its management. As an example of the splendid feeling which exists among the employes toward the doctors who are doing so much to help them, I would say that early this week I visited one of the hospitals of the city where I found four of the wives of our employes recovering from serious operations performed by the medical staff of the Company. In visiting with one of the ladies she volunteered this remark: "My husband is earning good wages, about \$125 a month; I have needed this operation for a long time; in fact this is the second operation that has been performed through the services of the Welfare Association, and we would be \$600 in debt to-day if it was not for what the Association has done for us; we simply could not have done it, and I would have gone on suffering, as I have suffered for years." I get that kind of message over and over again from these people who are receiving this splendid service, and I have seen the feeling of appreciation and of satisfaction grow with this sort of work during the 5 years that I have been connected with it. I know that quite a percentage of the men who came into the Association when it was organized, were doubtful of the outcome; they were suspicious of just what was coming; and, as Dr. Lemon has hinted, some of our old employes failed to come in when the doors were thrown open and they might have come in. I never visit one of those men when they are sick now, that he does not bemoan the fact that he did not come in when he had an opportunity. But the time has passed, he is past the age limit in which we can admit them to the Association, and he must take care of himself so far as he can, outside of what the Welfare Department can do for him. I presume the feeling among the employes is evidenced as strongly by this one fact as any other, but as this work went on among our employes, the wives of our employes became so enthusiastic over what was done for their husbands—and this was before the medical attention was extended to the wives and children—that they organized themselves into a group known as the "Woman's Auxiliary", and they do a great deal of splendid social work, in visiting the sick, and seeing that flowers are sent to those in the hospital, and those seriously sick at their homes, and looking after some other social affairs. As this surgical attention was extended to the wives, the Woman's Auxiliary was in a position to be of great service to the doctors in helping to take care of the families, the children of employes, where the mother had to be removed to the hospital. For instance, here is a family of 2 or 3 small children; the mother is advised by the surgeon that she must go to the hospital for an operation. It is not always easy or possible to get help to come in and take care of the family. We now turn to the Woman's Auxiliary, refer the children to them, and the housework is taken care of by some member of the Woman's Auxiliary while the patient is in the hospital. The knowledge that affairs

at home are being taken care of has its effect on the recovery of the patient, as every doctor knows; the mental attitude of a patient has a great deal to do with the recovery. And the little children that are in the background, in the home, are taken care of. This assists the medical men in accomplishing their results.

HEALTH INSURANCE.*

BY A. W. GRAY, M. D.,

MILWAUKEE.

The following quotations are from authoritative sources:

"In all countries, at all ages, it is sickness to which the greatest bulk of destitution is immediately due."

"Last year in Buffalo less than 1 per cent of our poverty was due to lack of work, and more than 76 per cent to sickness."

"Considerably more than 50 per cent of the problems of the Associated Charities of Milwaukee are partially or entirely medical problems."

Like quotations could be multiplied indefinitely, but more are not needed. Destitution, then, in the opinion of social workers the world over, is largely a medical problem. Social workers recognize the fact, the public generally realizes it, the poverty stricken know it from bitter experience, and the members of the medical profession, possessed of the science and art necessary in its solution, live with the fact in their daily lives. The problem is recognized universally, the solution is known, those who possess the knowledge necessary for its solution are ready and willing to help, and yet the problem remains.

It remains largely, as I have said, a medical problem, waiting for the application of medical knowledge. There is honor and glory for our profession in its solution. Can we grasp the opportunity?

Fifty per cent of sickness is preventable with present medical and sanitary knowledge. When this prevention shall have been accomplished it is estimated that at least 75 per cent of total disability will have been done away with. No estimate has been made, nor probably can be made, as to the increase of efficiency, both mental and physical, which would result in a community relieved

from the financial and physical strain of 50 per cent of its sickness and 75 per cent of its disability; but it needs no great imagination to picture the happy prosperity of such a community. The growing glory of the medical profession is the prevention of disease. Are we ready to live up to our ideal when the opportunity presents?

Cure of disease and mitigation of suffering, now handicapped by economic conditions beyond our control and by ignorance which we cannot reach, too often dependent upon our personal philanthropy and paid for only by our satisfaction in work well done, always constitute the immediate concern of the great bulk of our profession. Here our daily work is done, here in personal education is the beginning of our preventive measures, here is our entering wedge in the fight against destitution. Do we want the handicaps removed? Can we see the way if it is opened?

If we as a profession are really in earnest in our desire to prevent disease: if we are dissatisfied with the incomplete curative measures now possible and earnestly wish for greater opportunity; if finally our professional conscience has within itself a social conscience which is developed enough to see community needs and to want to meet them; then, I think, we are ready for a community plan of practice and will welcome Health Insurance.

The individualistic plan of practice is a failure in many respects. This statement needs no qualification before a medical audience, even though its true significance might be misunderstood by laymen. We medical men understand what it means, however. We know that it fails to reach more than 50 per cent of those who need its services. We know that it fails to give ideal or even adequate service to most of those it reaches, whether rich or poor. We know that it fails to return adequate recompense to the great bulk of physicians for their knowledge acquired in training and their effort expended in practice. And yet we know that these failures are essentially no fault of ours as individuals; that they lie in the system. The economic factor is the real deterrent to good service, preventing the poor from getting that which they cannot afford, and deterring the rich from knowing what their health needs are. Ignorance of health needs can never be completely overcome until personal contact by physicians with 100% of sickness is possible, so that personal instruction and prevention can go hand in hand with curative methods applied at the earliest possible moment.

*Read at the 71st Annual Meeting of the State Medical Society of Wisconsin, Oct. 3-5, 1917.

Health insurance as proposed is a democratic community undertaking, under state control, to furnish medical service and to indemnify for wages lost through sickness. It proposes to do this for certain individuals who, though living above the pauper line, have incomes too small to allow them to meet the expense of prolonged sickness successfully as individuals without dropping below the pauper line. It proposes to spread the expense of this undertaking among the individuals so insured and among the industries in which they are employed, the latter on the theory that the industries are responsible for a certain amount of industrial sickness. It is proposed also that the state shall contribute in some measure to the expense of carrying the insurance, on the theory that the state is responsible for a certain amount of community sickness.

It is not possible at this time to consider in detail any of the many most interesting economic questions which arise in connection with health insurance, nor to try to answer in detail the objections which have been raised to it on the ground of impracticability. As to the economy involved it is enough to say that its proponents do not claim that it will decrease the cost of medical care for the insured, but admit that it will in fact increase it, as a necessary corollary to making it more efficient. It will only spread the expense of individual sickness, just as other forms of insurance spread the expense of individual losses. Where this expense will economically fall does not particularly concern us as medical men, but it is interesting to note in passing that it will in fact eventually fall upon the industries, as a part of the labor charge of manufacture, since it is now well recognized that the need of the workers is one of the greatest factors in determining wages.

It is not claimed by the proponents of health insurance that it will decrease the *amount* of medical service for the insured. They admit that it will in fact increase it, again as a necessary corollary to its greater efficiency. Even prevention of sickness does not decrease medical service, partly because personal instruction by physicians is the price of prevention and partly because individuals and communities, enlightened as disease is prevented, demand more medical service.

Again, the proponents of health insurance do not claim that the total days of disability through sickness will be diminished under health insurance. In fact experience has shown that in most in-

stances the average length of disability allowed has been increased. Restitution to efficient health is the economy required of industrial health insurance, not less medical service, nor cheaper medical service.

Varied objections have been raised to health insurance that can be grouped under the one word, impracticability. In general these objections do not concern us as medical men. But they can be answered as a whole by the fact that health insurance is in existence and is working in practically all of the great nations of the world except our own, and in many of the small ones; that it has not been abandoned in any country after once established; and that changes have strengthened, not weakened, its hold on all affected by it. It is coming to us, inevitably, whether we wish it or not; and it will be practicable with us just as it has proven practicable in other countries.

Will Health Insurance prove a remedy for the failures of individualistic practice? Will it allow us to attain to higher ideals as a profession? Will it promote prevention of disease? Will it largely prevent destitution due to sickness? To all of these questions I would unhesitatingly answer—yes. It is not claimed to be a panacea. It will be, it is true, a remedy with a limited application. But limited as its provisions will be to a certain economic class, it will attack our problems where they are the most concentrated, and are of the greatest import, and will react favorably on the standards of practice among all classes in the community.

Will it return adequate recompense to physicians working under its provisions? The answer to this question, it seems to me, lies largely with the physicians themselves. The plan of health insurance furnishes favorable conditions in this respect. It will bring physicians in contact with 100% of sickness in the group insured; it will ask of physicians earlier service and longer service in individual cases; it will inevitably demand a higher standard of service, unhampered by lack of facilities to give it. The value of the services will be greater; the pay for the services must be greater. If we physicians as an united body have the courage to make it as clear as day light that the success of health insurance will depend absolutely upon the higher standards of practice, and that the higher standards can be maintained only by a profession well paid and contented in its work, there will be no difficulty in the matter. By emphasizing our ideals

in service we shall obtain the correct solution of this problem.

DISCUSSION.

DR. G. H. FELLMAN, Milwaukee: Mr. Chairman and Gentlemen: The principles brought out by Dr. Gray and Dr. Lemon in their papers are very laudable. There is no doubt but that a form of health insurance will ultimately come to this country. But the emphasis that Dr. Gray laid upon the matter from the medical side "that we must be as a unit in advocating this principle" shall be accompanied by another suggestion, and that is, to see that the medical profession receives adequate compensation, otherwise there will be no adequate service rendered. My experience with the Legislative Committee of the State Medical Society has not given me much confidence in what the state will do for the medical men. Whenever we have brought matters before the State Legislature, bills that would in any way benefit not only the medical men but also the public at large, we usually drew the short end, as any of the committee men who have been on this committee for the past year will know.

MR. JACOBS, New York: In conformity to your kind offer it might be of interest to tell you some of the things that we of New York know about late legislation. The big thing, Mr. Chairman, that your speaker did not mention, was that the health insurance as we now know it is not health insurance as a theory; it is the bill that the American Association of Labor Legislation has introduced. That is the thing that we seem to be up against now. As all of you gentlemen I think know, it has been introduced in something like 19 states. It is backed by any amount of capital on the part of capitalists, and a large number of professional philanthropists and men who have no place in this matter at all. It is not the insurance people, but people who have no place in the matter, who are taking the place principally, of the medical profession. Your speaker said, and also the previous gentleman, that it was advisable from the standpoint of the general public, and everybody admits that. But I should think that a medical association would be looking at it from the point of view of the doctor, and the bill being introduced is absolutely inimical to the medical profession, and the physician cannot live under it. Now first of all it mentions the panel. The panel means that certain physicians shall be organized in each district to treat the people in that district. One of the big disadvantages, Mr. Chairman, is the fact that eventually the thing will get down to contract prices. We know perfectly well that any number of physicians have and can and will be obtained for \$1,200 a year, and we know that it is said that the average income of the contract physician is not equal to \$1,200 a year, and the result will be that when these positions are held open to competition there will be a struggle, a competition, among the poorer paid physicians coming in and offering themselves at lower salaries for the care of these patients. That is an argument very much in favor of the per capita payment, because we would not want to see this thing degenerate into the

poorest possible type, or the worst kind of medical practice, contract practice.

Another thing, Mr. Chairman and Gentlemen: The Association of Labor Legislation bill fails to provide for the most important person, the man out of work. What are you going to do with him after he is out of work for a week. He is out of benefit; he is a member of a unit entitled to medical treatment; he does not get it; he needs it worse than the man who is working.

Another thing, if this law is adopted, like the different laws have been, in one state and not in another, we will say, for instance, that Wisconsin adopts it and Illinois does not, it represents a definite taxation of about 5% on all the manufacturers of your state, and you will not be able to compete with the adjoining states, and the manufacturers will move to states who do not have to pay those taxes; your population will move and so will your factories.

Another thing, Mr. Chairman and Gentlemen, it has been well said that this law is in existence all over Europe. I believe that the former Prince Bismarck has the reputation of being the author of this wonderful movement, and possibly in a state that boasts so many German descendants as Milwaukee does, there are gentlemen here who have practised in Europe under the German system of labor legislation, if I may call it that, and who are very, very thankful that they are here and out of it. A large proportion of our New York German doctors have been glad to admit that they came to America to get away from the wonderful benefits of the German system. Another thing is that if a man is a young man, a general practitioner, and he does get a designation as a panel physician, what chance has he of improving? Those of us who are young may possibly, by study and experience, work and become specialists. A specialist is not born, nor is he graduated; he is the product of the general practice.

This Association for Labor Legislation undertakes to designate that you or I may be considered as a specialist. That is all very nice for the man who is a specialist now, but the panel physician will never get anywhere, he will live and die on his ten cent per capita, and has very little prospect of getting anywhere, because the specialist will be designated as consultant.

Another thing: this law contemplates the appointment of political managers and commissioners of the state, and you can imagine how far they will go. We know exactly what graft is in state organizations.

We have considered the bill of the American Association of Labor Legislation in every county society in the state of New York, and it has been absolutely voted down as being inimical to the interests of the profession. I was sorry to hear the report of your committee taking up the matter entirely from the standpoint of the people. I should think that it is about time that you here in Wisconsin as well as we should get together and try to see that you are going to live under the law. It may be inevitable, and it may be coming, but it cannot come under that bill, and if it does, the profession will simply cease to exist. We have instructed our state council to draft a bill that is practical. Let the medical profession of the country get together and draft a

bill under which we can live, and put as much force behind it as the Labor Association has behind its bill, and have it introduced in the legislatures of the various states, like they have done, and show the country at large what the profession needs, and not so much what the poor people need, because after all, philanthropy is and ought to be a large part of medicine. You simply cannot pay your bills under this proposition. I thank you.

REVEREND H. H. JACOBS, Milwaukee: Mr. Chairman, and Ladies and Gentlemen: I was a little disappointed in the remarks of the last speaker. I understood that he is not, from the Wisconsin State Medical Society. Am I right?

PRESIDENT: Yes, sir.

REVEREND JACOBS: He did not sound like the sort of stuff I have heard from the Wisconsin State Medical Society in the last 20 years. I have been sort of an unofficial lay member of that organization by a kind of brother-in-law relationship for a long time, and we social workers in Wisconsin have learned to look to the medical profession for leadership in all social matters affecting the poor folks of this state. When the question of prevention of tuberculosis began to press, it was the Milwaukee Medical Society that went into its pockets for the first \$500, and started the ball rolling; the agitation which developed the Wisconsin Anti-Tuberculosis Movement. Whenever in our social work we have bumped into these social questions, which are so largely medical questions, and primarily medical questions most of them, we have found the medical profession always in the lead, and I cannot believe, from my observations of the profession of this state and this city, that the last speaker voices the bottommost thought of the profession. I have never yet, as a social worker, turned to the medical profession of this city without getting an answer—not an answer in words, but an answer in work and plan and judgment.

Health insurance is coming, of course; it is on the horizon; it is well on its way. And I will say that I believe that the medical profession of this state are going to meet it in the right way, and the social workers of this city and state look to the medical profession for leadership, and they have good reason from past experience to look to the medical profession for leadership in this line as in other lines.

DR. A. W. GRAY, Milwaukee: I do not share Dr. Fellman's pessimism in regard to the legislature of the state of Wisconsin, having been the chairman for a great state of Wisconsin. Having been the chairman for a great many years, of the Legislative Committee of the State Medical Society of Wisconsin, I saw in the later years of my work—and I got out of that work about 4 to 6 years ago—a growing recognition of the rights of the physicians in legislative matters, and I believe that our experience this last year in very easily killing off so many bills inimical to the profession, when we knew of their existence, and we finally, by one means or another, did come to know of their existence, that there will be no difficulty in having justice done to the profession by the State Legislature of Wisconsin. The present attitude toward the medical profession in Wisconsin is

very different from what it was 15 and 20 years ago, as all of us who have been in this work can testify.

Dr. Jacobs has, I am sorry to say, done the very thing that the Committee asked should not be done in the discussion of this question. We asked that the question be taken up in an orderly way, in the first place considering the principles of health insurance, and finally, the individual provisions of proposed bills. The two things should not be mixed up at the present time. It is impossible to keep our thoughts clear on the subject if we bring forth our arguments in such a disorderly manner. We in Wisconsin are by no means committed to the bill of the American Society spoken of—it is such a long name that I frequently cannot mouth it properly. We may and probably shall have an entirely different bill. And what the Committee is building for is a united profession, to see that the bill that is finally passed in this state, because we feel that we can prophesy pretty definitely that a statute will finally be put upon the statute books,—has all those qualities which we believe are necessary not only for our own protection, but also to make it possible for us to carry out our professional ideals in practice.

Some of the arguments that are used against the bill recall very definitely arguments that have been used against other advances that have been made, and made especially in Wisconsin, as Wisconsin is a pioneer state. It seems to me that I have heard the same question of state lines brought up against the Railroad Commission, child labor legislation, and other forms of legislation which we are thoroughly wedded to, and I am very sure that none of us would go back to the old days when we lived under a government without such statutes. I think we must all prepare our minds for this coming change, and if we do prepare our minds properly, and understand the question properly, and go at its solution as a united profession, there will be no difficulty in the state of Wisconsin in getting such legislation that we may be very thoroughly proud of it.

THE THIRD GREAT PLAGUE, a discussion of Syphilis for Everyday People. By John H. Stokes, A. B., M. D., Chief of the Section of Dermatology and Syphilology, The Mayo Clinic, Rochester, Minnesota. 12mo of 204 pages, illustrated. W. B. Saunders Company, Philadelphia and London, 1917. Cloth, \$1.50 net.

Dr. Stokes' small book is a popular exposition of a most vital subject. We are inclined to doubt his historical accuracy in attributing Syphilis to the poor Haytians. The beginnings of Syphilis are lost in obscurity. But Columbus' sailors had it when they started to America.

Dr. Stokes has handled his subject well. His attitude is one to which we can all subscribe. The more the whole subject of syphilis is aired, the better it will be for mankind. Books written like this one should have a wide distribution among the populace, for it is to them that we physicians must turn to give us power to apply to society the knowledge which we possess. We may truly say, "Give us the power to do what we know is best to stamp out syphilis and we will undertake to do it."

THE PRESENT STATUS OF TONSIL REMOVAL.

BY HENRY B. HITZ, M. D.,

MILWAUKEE.

The removal of tonsils should be decided upon with care and discrimination. This is particularly true with regard to the aged and the very young. What then are the reasons for basing a conclusion to operate? At the present time, with the incubus of focal infection hanging over us, it would seem as if it were necessary to sacrifice the tonsil for ingrowing toe nails, hemorrhoids, or any other human disorder. As a matter of fact, not infrequently cases are sent for tonsillectomy without the slightest shadow of sound reason either in the past history or present condition, and the specialist is supposed to decide at a glance whether or not these apparently innocent structures should be removed. In this connection with a rather broad experience upon which to base judgment, I wish to state that in many instances the mere appearance of the tonsil alone is not sufficient to decide for or against the measure of tonsil removal.

At the risk of being criticised for reiteration, I would group the fundamental indications for removal of tonsils under three prime headings, merely referring to a large number of secondary ones. First and foremost, it may be put down as axiomatic that the presence of enlarged lymphatic glands in the upper triangles of the neck are indicative of disease in the tributary regions. There are three main sources of probable infection, namely, the teeth and alveoli, the accessory sinuses, and the lymphoid structure of the throat; with the tonsils, in most instances being the great open portals of infection. This is particularly true in the young. The presence of chronically enlarged glands in close proximity to the tonsils make it imperative to seal this point of entrance, and this can only be done by complete elimination of the tonsil.

Therefore, it is necessary to first clearly determine the cause of adenitis in the upper triangles of the neck.

The second of these main causes is the history of frequent attacks of acute tonsillitis.

And the third is the presence of pronounced hypertrophy, leading to a physical interference with deglutition, respiration and articulation.

Of the secondary indications, those definitely covered under the heading of focal infection must

be taken into account. Such, for example, as the presence even in small tonsils of contained pockets of pus or cheesy accumulations. Then the general systemic conditions, of which a few pronounced illustrations only are necessary, such as organic lesions resulting from secondary infections of the heart, kidneys and joints, with some of the blood conditions of a presumably septic pathogenesis as diabetes; possibly general tuberculosis.

The main facts in any of these general conditions, however, must be carefully sifted before one may definitely charge it against the tonsil. And it is right here that I would like to emphasize the importance of careful general physical examination of patients, and particularly the older ones, who are referred to the specialist for tonsil extirpation.

There can be no question but that the tonsil in the early period of life at least has some protective function, and the question of deciding, in the very young, when tonsils should or should not be removed, when there are no marked indications, is a difficult one. Some of these little ones are brought for operation without sufficient evidence of its necessity. My own feeling has been to hold them off and keep the case under observation until I am definitely satisfied that this measure is the wisest.

As regards adults, the usual reason given for a desire to have their tonsils removed is generally some articular manifestation, chronic in type, and I think too much care can not be first given to eliminating other possible causes of focal disturbance, such for example as alveolar pockets, accessory sinus disease, rectal fistulae, chronic suppurating ears, septic gall bladders or other possible chronic septic lesions. The removal of tonsils in the middleaged is more difficult, and certainly more uncomfortable afterwards to the patient for a considerably longer period of time than it is in the young, and this should be made clear to the patient before the operation is decided upon. It is my observation that the throat of the average adult does not readjust itself to the altered state of affairs as promptly nor as expeditiously as in younger individuals, and that some of them not infrequently complain for months afterwards of throat discomforts, where there is no serious scarring or other reason to account for it. If this had been observed only in patients upon whom I had operated, I might have attributed it to my own peculiar method of work. As a matter of fact, I have had

people complain to me who have been operated upon by others, where the quality of the work was of the very best, and whose methods were essentially different from my own. I think that this constitutes at least one more reason for the exercise of exceptional care before deciding upon removal of adult tonsils.

When it has been decided that tonsils should be removed, for any cause, there should be no half-way measure; it should be thorough and radical, and should not have to be done a second or a third time. Nor should the patient be permitted to suffer again from frequent attacks of the same old tonsillar disturbance. When I say radical, I mean complete extirpation of the faucial tonsil, and I do not mean extirpation of the pillars of the fauces, or part or all of the soft palates nor the deeper structures beneath the tonsil. The results of faulty work are seen all too frequently by every specialist in active practice. Whatever the method employed in removing tonsils—and I do not here propose to discuss the virtues of any single method—its execution should be done with the least possible traumatism to the surrounding tissues. Some scarring will result under the best of conditions at times. As a rule, however, it is the result of injudicious or inexpert handling at the time of operation. In certain cases it is almost impossible to avoid because of some reaction after operation, due to the liberation at the time of operation of contained septic elements. Therefore, it is a good plan to assure oneself that the individual has not been the subject of a recent acute inflammation. It is never wise to operate within two weeks after an acute tonsillar infection, and if it is possible to allow four weeks to elapse, it is safer. Although an occasional case may be operated within a very short period after acute infection with impunity, it is not a safe rule to follow.

The sooner the profession at large learns to look upon the radical removal of tonsil as a major operation, and to treat it accordingly, the fewer will be the number of complications resulting. It is not only necessary that the operation should be recognized as a *major operation*, but the future care given that individual should be of a suitable character, and that is, wherever available, in a hospital and under hospital conditions. Primary hemorrhage in tonsil operations is a condition of insignificance, because, like the same element in any other surgical procedure, it is susceptible of

immediate surgical control. It is the secondary hemorrhage, infrequent though it may be, that must be avoided. This can only be done by keeping the patient quiet sufficiently long after operation for the process of repair to have made the proper headway. Nature covers the wound created by the removal of a tonsil with a membranous exudate or crust, beneath which the process of repair is progressing. In the average case this begins to disappear between the third and the fifth day, usually by a process of molecular disintegration, modified somewhat by the amount of primary reaction. If this blanket is exfoliated en masse but adheres at certain points, it dangles in the throat, causing the patient to make expulsive efforts, which may result in tearing open some vessel and start bleeding of more or less violence. Even then, however, secondary hemorrhage as a rule would be inconsequential, if a competent man were on the spot to control it. As a matter of fact, it is extremely unlikely to occur to those cases kept quiet in the hospital. It does occur at times where the patient is up and about and is exerting himself, and oftentimes when he is miles from where he can receive attention; and the serious danger then is the loss of time between the onset of hemorrhage and its control. There are, furthermore, other reasons why a patient should be kept in the hospital. It takes at least ten days, and often two weeks before complete repair is established, and it seems only common sense to keep the patient for at least five days in repose, during what might be termed the average danger period, barring other complications. And last but by no means the least is your own peace of mind, for if your patient is in bed in the hospital, you know that he is not doing a lot of fool stunts elsewhere.

As to results: one often hears comments upon the tonsil operation, for it and against it. Oftentimes too much is expected of the removal of tonsils. Had the operation been devised in the 16th century, history probably would have recorded that Ponce de Leon, instead of looking for the fountain of eternal youth in Florida, would have hied himself to the best specialist that he could find, and had his tonsils removed. It does not guarantee eternal youth, nor an absolute and complete avoidance of all subsequent throat, nose or ear conditions—nor eternal freedom from rheumatism. What it does do is to seal up the main portal of entry for septic diseases in the upper air

tract besides removing a physical obstruction to the function of the throat. It does not remove from the system, as far as we are able to determine, any structure that is vital to the best interest of the patient; for if there is a necessary function of which we know not of, in connection with the faucial tonsils, then that function is taken up in a compensatory manner by the solitary follicles in the upper air tract, and possibly by the solitary follicles in the small intestine, or other lymphoid structures in the body. The preponderating mass of evidence is that the removal of the tonsils, where required, is a beneficial measure of undoubted value in the conservation of general health, and of hearing, preventing the devitalizing effect of frequent acute infections; and in the child materially aiding by this process in the normal and proper growth of the individual.

A PLEA FOR CONSERVATION OF FINGERS.

BY EVERETT W. MAECHTLE, M. D.,

WEST ALLIS.

In presenting the following brief article I do not presume that I am projecting anything altogether new or marvelous upon the industrial public, but I feel more and more that nowhere in our field is there a greater opportunity for conservative work than in the careful repair and after treatment of lacerated and crushed fingers.

Far too much amputating has been done, and only in the past few years has the possibility of the use of exuberant granulations or as the Layan calls it "Proud Flesh" been made practical.

Our preliminary treatment of practically all open wounds, is of course, the dry method. We do not scrub with soap and water but after removing the most of the dirt, grease, etc., with gasoline or turpentine, we trim the jagged edges of our wounds with sterile scissors and tissue forceps, handling our member with instruments as in bone work. We next put on a rubber constrictor to prevent small fragments traveling up the open veins if the injury is very extensive, and saturate the wound and surrounding skin at least one inch with tincture of iodine. If necessary to suture, bring the edges of the wound lightly together with boiled silkworm gut or silk and drain the dependent angle of the wound with thin strips of gauze soaked in

twenty-five per cent balsam of peru in castor oil or small guttapercha strips. These we leave in place for twenty-four hours.

These general measures are carried out except that at the distal end the finger is left open and there whatever of healthy tissue is left is used as a supporting structure for the new finger. Around the finger so as to bring into use all of the parts we have left to work with, we place a celluloid or waxed paper cylinder made of a section large enough to encircle the finger. Thru the end of this splint or tube we drop gauze soaked in balsam of peru in castor oil lightly so as not to disturb the longitudinal fragments but keep them in place. We use the twenty-five per cent mixture of balsam in oil because we have found it just as efficient as whole balsam and less apt to dam up our secretions, also while we are great advocates of the use of the balsam, we find that the oil has a beneficial effect—soothing as well as stimulating.

The dressings are changed about every three or four days, the area sponged out with alcohol, and new gauze inserted. The celluloid shell is occasionally removed to be cleaned with alcohol and new applied. However, we find that the less we can disturb any such dressing the better results we get. This holds good also in practically all wounds which the surgeon sees himself and has charge of from the beginning. We believe that poor results often come from too many dressings rather than not enough.

Inside of two or three days our finger tip begins to show granulations and they assume the form of our shell, growing until we remove the support, then the fragments we have left assist by starting new skin which in due course of time covers the whole tip. It might be thought that we are keeping our men off from work longer than our results would warrant, but we are constantly developing from one-half to three-quarters of an inch of good finger tip in two to three weeks covered generally by a good nail, and in most cases so nearly normal in appearance as to be unnoticeable, where an amputation at the distal joint would have been considered necessary. This length of time would not be considered excessive for amputated fingers to recover their workability; in fact, our loss of time under the granulation method averages generally about one-third less than where we have been obliged to amputate.

Our men have been generally pleased with the lack of pain at the beginning, and when they saw

the results as compared to others they knew about, they invariably became good advertisers.

We are in a position to show several hundred good fingers to substantiate our observations, and have yet to see a result so poor that we felt would bring us criticism even from the most exacting of those desirous of perfect functioning and cosmetic results.

Aristoteles hath said, that if you shall rub the anus of a cock with oil, he will avoid his congress with the hen, nor will he be able; and if anyone desire that the cock shall not crow, then he shall rub him as to his head and forehead with any oil.

THE SCHICK REACTION IN RECRUITS.

ABRAHAM ZINGHER, New York (*Journal A. M. A.*, Jan. 26, 1918), reports on the findings of the Schick test in examinations of recruits at Camp Upton, Yaphank, New York. Thus far, more than 2,500 men have been tested. One is confronted with the necessity of controlling the reaction in this test so as to separate the Pseudo from the true reaction. The false reaction is due to the alkalized protein of the diphtheria bacillus and not to the soluble toxin giving rise to the true reaction. In order to determine whether a reaction was a positive or a pseudoreaction, the following procedure was adopted for the tests: "Diphtheria toxin heated to 75 C. for five minutes was used as a control. By the heating of the test toxin, the soluble toxic fraction was destroyed, while the autolyzed protein was not appreciably affected. To allow, however, for any slight deterioration, we used in the control 50 per cent more of the heated toxin. For the Schick test, the toxin was used in the strength of 1:1,000 (the minimal lethal dose is 0.01 c.c.); for control, the heated toxin in the strength of 1.5:1,000. The Schick test was made in the usual way on the right forearm, and at the same time, the test for the pseudoreaction was made on the left forearm. The reactions were read twice, once at the end of forty-eight and again at the end of ninety-six hours." The earlier reading was necessary to show the existence of the pseudoreaction which, it is known, occurs earlier than the true one. It appears as a well marked redness at the site both of the test and the control, but fades quite rapidly leaving only a bluish brown area of pigmentation. The combined reaction, representing both true and false together, resembles the latter at the end of forty-eight hours, but at the end of ninety-six hours the positive reaction stands out distinctly, while the control shows only the bluish-brown pigmentation. The negative reaction shows no redness anywhere. A table is given comparing these results. After the men are grouped in units, the regimental surgeons should be able to make the test. Such a record is valuable, since it is probable that the persons who give a negative Schick are protected several years and probably for life. Only those who show a positive or a combined reaction need to be

immunized with a dose of antitoxin during outbreak of diphtheria. They also should be actively immunized with diphtheria toxin-antitoxin so as to develop a lasting protection against the disease.

If you shall fumigate a house with the burned lung of an ass, or any place, then shall it be cleansed of all scorpions and serpents, and the Philosophers draw from this that this shall have value against poisons.—*Alb. Magnus.*

CEREBROSPINAL MENINGITIS IN THE ARMY.

Unfortunate as it is that cerebrospinal meningitis has been disturbingly prevalent in some of the cantonments, it seems probable that our knowledge of the disease will be increased as a result of the intensive study that has been made possible by the outbreak. Competent men are actively engaged in the diagnosis and treatment of this malady, and new observations of importance have already been made. The discovery of still other facts may with confidence be predicted.

In the effort to arrive at a positive diagnosis earlier in the disease than has heretofore been considered possible, attention has been focused, as noted by Herrick, on the petechial exanthem, which, when carefully looked for, is found to appear very early, indeed, earlier than either Kernig's sign or Brudzinski's sign, and before rigidity of the neck or recognizable changes in the cerebrospinal fluid. The old name for the disease, "spotted fever", has again come into its own.

Another discovery, apparently of considerable significance, is the observation that, at a very early period in the course of the disease, two successive lumbar punctures, made at intervals of a few hours, may lead to the positive demonstration of pus cells and meningococci in the cerebrospinal fluid obtained by the second puncture. The fluid obtained at the first lumbar puncture made at the time the petechial rash appears is often sterile, whereas the fluid obtained at a second puncture a few hours later (and at a time when a primary puncture would be negative) will contain both intracellular and extracellular meningococci. It has been suggested that this observation may be legitimately interpreted on the assumption that the meningeal infection begins within the skull, the spinal meninges becoming infected by direct extension only later, and that by the removal of clear fluid from the spinal subarchnoid space at a first puncture, the infected fluid from above reaches the spinal area earlier than would otherwise be the case, so that the second lumbar puncture permits the examiner to determine a few hours after the first puncture the occurrence of the meningeal infection and its meningococcal etiology.

A third contribution of no small consequence consists in the enumeration of the meningococcus carriers in the camps, and the determination of the relatively large number of carriers among those that have been in contact with meningitis patients, in contrast with the relatively small number discoverable among "non-contacts." The exact figures in the different camps will doubtless

be compiled and reported later on; they should be of real value in clarifying our ideas regarding modes of infection, and in applying practical methods of prophylaxis. It seems probable that the methods now being used to disinfect the carriers will prove satisfactory for hosts in whom the meningococci are present only in the nasopharynx, though other methods will have to be devised to sterilize carriers in whom the meningococci are located in less accessible regions (such as the depths of the paranasal sinuses).

It is reported, too, that blood cultures made very early in the course of the disease reveal surprisingly often the presence of meningococci in the circulating blood. Heretofore, it has been assumed that the infection of the sheath of the nervous system occurs by direct extension from the nose to the cerebral meninges through the cribriform plate of the ethmoid. The result of the blood cultures referred to above would lend support to the view that the meningococci first enter the circulating blood, and are only secondarily deposited in the cerebral meninges by way of the blood vessels. If this discovery is confirmed, the Army physicians will have a fourth important observation to their credit. This conception of a hematogenous infection of the meninges would, of course, involve as its corollary the existence of some local susceptibility that determines the invasion, in at least the majority of the cases, of the cerebral before the spinal meninges.

Finally, it would appear that a new fact therapeutically useful in meningococcal meningitis is about to be established. Acting on the basis of the early meningococemia that, it is asserted, has been demonstrated, some of the Army physicians have been treating meningitis patients by intravenous injections of large doses of antimeningococcus serum as soon as the diagnosis is made, with better results, it is maintained, than when intraspinal injections alone are used.

Time will, of course, be required adequately to test these new ideas. But from all appearances it seems likely that data of incalculable value for the diagnosis and the therapy of epidemic cerebrospinal meningitis are being brought to light by these investigations. If present expectations are realized, not only will the lives of many soldiers be saved, but also through these war-time studies the resources of the civil practitioner in times of peace later on will be definitely enriched.—*Jour. A. M. A.*, Jan. 26, 1918.

THE SANITARY DANGERS FROM DOMESTIC PETS.

A report on an epidemic of virulent smallpox in one of the southwestern states, submitted to the Surgeon General of the Public Health Service by one of the officers of that corps, sets forth with renewed emphasis the role that domestic pets may play in the transmission of disease, especially among children. The instance cited was that of a fatal case of smallpox in an infant in arms. The nearest case of the disease was in a house a block or so distant, and although the two families had no social relations, this apparently did not deter a dog belonging to the infected family from dividing his atten-

tion impartially between the two homes, eating at one place and sleeping at the other.

In no other way could the source of the infection of the baby be explained, than that the dog fondled by the children of the smallpox family carried the virus of the disease to the neighbor's baby. Similar instances have been noted before in connection with smallpox transmission, and cats and dogs both have been incriminated as carriers of plague infected fleas—cases of bubonic plague so contracted having been observed by Public Health Service officers working in recent plague epidemics. The same household pets also have been charged in certain instances with the responsibility of carrying the infection of diphtheria, scarlet fever and other communicable diseases of children, as well as various intestinal parasites.

A disease that annually causes more than 100 deaths in this country is rabies, and the role of domestic animals in spreading this disease is definitely proven, speculation or circumstantial evidence being discarded.

Altogether therefore, it is perfectly evident that the citizen who keeps domestic pets maintains at the same time a very potential source of danger; a sanitary menace to his own household and to that of his neighbor. While this aspect of the subject applies year in and year out, it may well behoove the city dweller in these times of urgent demand for food conservation to seriously take council with himself as to whether he is justified in continuing to keep his dog or his cat, both of which are casual sources of mental annoyance to neighbors, as well as agents for graver potentialities.

TREASURY DEPARTMENT,
UNITED STATES
PUBLIC HEALTH SERVICE.
WASHINGTON.

April 5, 1918.

The Editor,
Wisconsin Medical Journal,
Goldsmith Bldg.,
Milwaukee, Wis.
Dear Sir:

In view of the reports in current medical literature of untoward results from the use of arsphenamine and neoarsphenamine, I have to request that you give publicity to the statement that it is requested that samples of any lots of these arsenicals which have shown undue toxicity be forwarded to the Hygienic Laboratory for examination.

In sending these samples it should be ascertained that the lot number is the same as that of the ampoules used on patients. The samples sent should, if possible, be accompanied by a brief note stating the approximate body weight and age of the patient, the dose and dilution of the drug given, the symptoms and results; that is, whether fatal or not.

Respectfully,

G. W. McCoy,
Director.

THE WISCONSIN MEDICAL JOURNAL

OFFICIAL PUBLICATION OF THE STATE MEDICAL SOCIETY OF WISCONSIN

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Annual Subscription - - - Two Dollars Single Copies - - - Twenty-five Cents

Address all business communications to THE WISCONSIN MEDICAL JOURNAL, 504 Goldsmith Building, Milwaukee

Vol. XVI.

May, 1918

No. 12

EDITORIALS

HONOR ROLL.

The following societies made the Honor Roll by reporting a full membership by May first:

100% CLASS.

Calumet	Ozaukee
Grant	Portage
La Crosse	Racine
Lincoln	Rusk
Marinette-Florence	Trempealeau-Jackson-B.
Monroe	Wood
Outagamie	

These deserve honorable mention:

75% CLASS.

Chippewa	Manitowoc
Columbia	Marathon
Crawford	Milwaukee
Dane	Richland
Dodge	Rock
Door	Sheboygan
Douglas	St. Croix
Eau Claire	Vernon
Green	Walworth
Iowa	Washington
Jefferson	Waukesha
Kenosha	Waupaca.
Langlade	

50% CLASS.

Ashland-Bayfield-Iron	Juneau
Barron-P.-W.-S.-B.	La Fayette
Brown-Kewaunee	Price-Taylor
Dunn-Pepin	Shawano
Green Lake-W.-A.	

Is your Society in the 100% class? If not, are you keeping it out by failure to pay 1918 dues?

PAY YOUR DUES!!

Never has the organized profession been called upon to assume such responsibilities as during the present world crisis. It calls for team work. It is your patriotic duty to support your organization and thereby do your part. If you have not paid your 1918 dues, send them in at once.

WARFIELD TO WAR FIELD.

THE Editor of the Journal has heard "the call". He has offered his services to the Surgeon General and has accepted a contract for special work in the section on Internal Medicine. Doctor Warfield left early in April for Jefferson Barracks, Missouri.

During Doctor Warfield's absence the Journal will be edited by the Secretary of the State society. He asks your co-operation in keeping the Journal up to the standard maintained by the absent Editor. Remember it is your Journal, not his. It belongs to every member of the Society. It should serve as the medium of expression between the great body of medical men in Wisconsin. Its pages are open to every member, and should carry out into the State the opinions of all, rather than of any one man. You are especially urged to send in news items, personals, and medical and association news.

YOU MUST DECIDE!

OUR country is at war. The Surgeon General has issued another appeal for medical officers. Whether or not you enlist is a matter you must decide for yourself and be guided by your conscience.

The young man, the single man, the man independent and the man who "will not go as a Lieutenant" are going to have a great deal to explain some day. Thank God there are not many of them—but there are a few. In this crisis, not to be compared with anything in the history of the world, and in all those years to come, it is going to be hard to explain to others if you cannot quiet your conscience now. And don't mistake—you will be asked over and over and over again.

 UNIVERSITY EXTENSION POST-GRADUATE COURSES.

IN these days of increased activity due to the war, with every man straining to carry not only his own burden of practice but that of his colleagues in khaki and blue as well, efficiency must be kept at a maximum. It will be next to impossible to neglect your practices for a fraction of the time necessary to get post-graduate work at our large teaching centers. The profession of the State will, therefore, welcome the opportunity to have this teaching brought to their very doors by the University of Wisconsin.

Courses will be given throughout the summer by Doctors F. C. Rinker and H. P. Greeley of the University School of Medicine. Similar courses were successfully given last fall at Fond du Lac, Oshkosh, Appleton, Wausau and Marshfield. This year's work will begin at La Crosse May 3rd.

The plans for this summer's work have not been completed. Physicians and Societies interested may have particulars and make application for courses by addressing the Secretary of the State Society who is the Chief of Organization.

 A COSTLY BY-PRODUCT OF WAR.

THEY brought him back from camp on a stretcher the other day. He had had hemorrhages of the lungs before he went to camp, he told the members of the examining board that he had never been strong enough to do hard

work and that he would never be able to fight, but he was passed in the hurry of the first draft and sent to camp in October. On December 21, he went into the camp hospital where he was in bed for thirty-four days, first with measles and later with scarlet fever. On his fourth appearance before an examining board, his card was marked suspected tuberculosis. Two weeks later he was examined and pronounced tubercular, and two weeks after the diagnosis he was discharged, these four weeks being spent in the barracks with other soldiers. He is 23 years of age, he has always worked on a farm, he would have been of some value in the industrial world but he could not stand up under the hardships of military life. He has come back to Wisconsin a wreck, his life unquestionably shortened by several years. He has been an expense to the government ever since he left for camp. He will continue to be an expense and unless he is sent to a sanatorium or taught by some other means how to take care of himself, he will be a menace to other people as long as he lives."

This, in brief, is the history of one of many cases which furnish the strongest possible justification for every effort that is being made to impress upon busy examining boards the patriotic and economic as well as the humanitarian necessity for unusual vigilance in detecting any sign of tuberculosis among men in the draft. This history was furnished the Medical Journal by a prominent Wisconsin club woman who appeals to the medical men of the state to "do something to prevent a continuance of cases like this," adding that in all her conversation with the young man in question she has been greatly impressed by the fact that "he made no complaint and laid no blame on any person." She believes, as does the Medical Journal, that the history of this case should be especially urged upon the attention of those physicians who as members of local draft boards are unwilling to assume the responsibility of keeping men of doubtful physical fitness out of service and who argue that it is better to send them to camp and let the decision be made there. An expensive proposition both for the government and for the men, as the above case demonstrates.

Nor is this case an exceptional one. The other day in Milwaukee there was a double funeral of two brothers who had died of tuberculosis within a day of each other. One, Walter S. Harris, aged 27 years, had been honorably discharged from the

army because of the disease. James, aged 25, had been prevented from enlisting by his physical condition. A third brother, Fred W. Harris, is now in France with Battery A, One Hundred Twentieth Artillery, the same organization from which Walter was discharged before it left Waco and after he had spent several months in training.

According to official records received by the Wisconsin Anti-Tuberculosis Association 102 Wisconsin soldiers had been discharged from various cantonments because of tuberculosis prior to April 1, 1918. The number is being increased almost daily.

O. L.

AN IMPERATIVE APPEAL FOR MEDICAL OFFICERS.

AN urgent and imperative appeal has just been issued by the Surgeon General of the United States Army, for doctors for the Medical Reserve Corps.

There are to-day, 15,174 officers of the Medical Reserve Corps on active duty and the Medical Department has reached the limit of medical officers at the present time available for assignment. With these facts before the medical profession of this country, we believe that every doctor who is physically qualified for service between the age of 21 and 55 years, will come forward now and apply for a commission in the Medical Reserve Corps.

The Surgeon General says: "So far the United States has been involved only in the preparatory phase of this war. We are now about to enter upon the active or fighting phase, which will make enormous demands upon the resources of the country." The conservation of these resources, especially that of man-power, depends entirely upon an adequate medical service.

Drafts of men will continually follow drafts, each of which will require its proportionate number of medical officers and there are at this time on the available list of the Medical Reserve Corps, an insufficient number to meet the demands of these drafts.

The real necessity for the complete mobilization of the entire profession is imperative. It is not a question of a few hundred men volunteering for service, but of the mobilization of the profession for the conservation of the resources of this country. Let every doctor who reads this editorial and

appeal from the Surgeon General, which appeal is based upon dire necessity, act promptly and present his application for a commission in the Medical Reserve Corps at the nearest Medical Examining Board. If you are not informed of the location of your Board, the Editor of this journal will advise you.

STAND BEHIND THE BOYS.

HOW many doctors have applied this now very expressive phrase to themselves?

There is nothing that puts more heart and gives so much confidence to a soldier in the thick of a fight, than the thought that if he does suffer a casualty, he will receive proper medical care and attention. What are you doing in this respect?

There are many boys, sons of your patients or friends who have been or will be called into the service, and what a source of consolation it would be to the parents to know that possibly their own doctor might be the one to look after their boy and they will welcome your acceptance of a commission in the Medical Reserve Corps and compliment you for so doing.

The opportunity for you to do the most good in a professional way to the greatest number of people, is to offer your service to your country through the Medical Reserve Corps. Do not think longer about it, but apply at once to your nearest Medical Examining Board, and if you are not informed of its locality, the Editor of this journal will supply the necessary information.

STAND BY OUR BOYS, YOUR BOYS, THEIR BOYS. Remember the gallant *French in 76. The British who stood by Dewey in 1898. The Garibaldis who were always for LIBERTY.*

The rapid expansion of the Army calls for a largely expanded Medical Reserve Corps. The Surgeon General has issued a most earnest appeal for doctors. The Department has reached the limit of medical officers available for assignment.

COURSE IN LABORATORY WORK.

ARAPIDLY expanding, effectual, and interesting field of service for women in medical work is that involved in the various laboratory departments. Owing to the war, the great movement that is now going on for the standardi-

zation of all the hospitals of the United States and Canada, and the increasing needs of the general practitioner because of scientific medical progress, there is a growing demand for laboratory technicians. Experience has proved that women are well adapted to this work, and, from present indications, will be generally employed in that capacity. Already women are not infrequently seen as technicians in the pathological and X-ray laboratories of hospitals and physician's offices, and may be needed in the various medical departments of the war service. For these reasons, and in answer to requests, also as another work in behalf of the advancement of what concerns public health, the Marquette University School of Medicine has planned a Summer School for Laboratory Technicians, which will open Monday, June 10, and close Saturday, September 7. The courses to be given are pathology, X-ray, dietetics, and hospital records. In the summer of 1916 a similar course was conducted at Marquette. The term then was six weeks, and the courses were attended by 91 students (sisters, nurses, and other women). The term has been lengthened this year to three months, in order that the student may become reasonably well experienced at the end of one session, instead of having to return a second, or a third year to complete the training. Milwaukee is fortunate in being the center of such a highly important contribution to medical needs, and it is anticipated that a great number of ambitious young women, such as desire to enter a very beneficial and interesting service, shall take advantage of this excellent opportunity.

ASSOCIATION NEWS

THE CHICAGO SESSION.

SECTION ON MISCELLANEOUS TOPICS TO CONSIDER RE-EDUCATION AND REHABILITATION OF DISABLED SOLDIERS.

At its recent meeting the Council on Scientific Assembly arranged for meetings of the Section on Miscellaneous Topics, the subject to be taken up being the re-education and rehabilitation of the disabled soldiers. Major Frank Billings, head of this division in the Surgeon-General's Office, has accepted the chairmanship of the section. The subject is one of great importance, especially to medical men. Further announcement will be made later.

SPECIAL GENERAL MEETING.

In addition to the patriotic meeting which will be held on Thursday evening, June 13, and which will be ad-

ressed by men prominent in public affairs, there will also be a general meeting on Wednesday evening, June 12, at which eminent physicians who have been active in the medical military service of our nation and its allies will take part.

SECTION MEETING PLACES.

The tentative arrangements for places of meeting are as follows:

Section on Practice of Medicine.—Banquet Room, Hotel Morrison.

Sections on Ophthalmology and on Laryngology, Otology and Rhinology.—Grand Ball Room and Red Room, respectively, Hotel La Salle.

Sections on Nervous and Mental Diseases and on Dermatology.—Ball Room and English Room, respectively, Blackstone Hotel.

The remaining Sections will be grouped, meeting in the Auditorium Theater, the Auditorium Hotel and the Congress Hotel. The theater will house in its main auditorium, the Section on Surgery, General and Abdominal, and in two smaller halls, the Sections on Genito-Urinary Diseases and on Gastro-Enterology and Proctology.

In the Auditorium Hotel, the Ball Room will be the meeting place of the Section on Pathology and Physiology, the Ladies' Parlor the meeting place of the Section on Pharmacology and Therapeutics, and the Section on Preventive Medicine and Public Health will meet in the banquet hall.

In the Congress Hotel, the Elizabethan Room will be the meeting place of the Section on Orthopedic Surgery and the Gold Room, the Section on Obstetrics, Gynecology and Abdominal Surgery; the Florentine Room, the Section on Diseases of Children, and the Green Room, the Section on Stomatology.

The Hotel Sherman will be the general headquarters where will be housed the Registration Bureau, the Information Bureau, the American Medical Association Branch Post-Office, as well as the Scientific and Commercial Exhibits.

In next week's issue the accommodations offered by these and the other hotels of Chicago for those who attend the annual session will be announced.

Reprinted from *The Journal of the American Medical Association*, March 23, 1918, Vol. 70, p. 868.

If you will drink largely of pure water each morning, especially in the month of June: You will preserve yourself from colic; for pure water works greatly to the conservation of health. (Bart. Moles. Lib. De Sanitate Tuenda.)

Architas has said that if you shall take the wax from the left ear of a dog, and hang it up over one that hath a fever, it shall comfort him greatly, especially in a quartan fever.—*Alb. Magnus*.

THE STATE MEDICAL SOCIETY OF WISCONSIN

ORGANIZED 1841

Officers 1917-18

G. WINDESHEIM, Kenosha, President
OSCAR LOTZ, Milwaukee, 1st Vice President
T. W. NUZUM, Janesville, 2nd Vice President

CARL DOEGE, 3rd Vice President
ROCK SLEYSER, Waupun, Secretary

DANIEL HOPKINSON, Milwaukee
Ass't Secretary
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Councilors

TERM EXPIRES 1923: 1st Dist., M. R. Wilkinson - Oconomowoc; 2nd Dist., G. Windesheim - Kenosha; 3rd Dist., F. T. Nye - Beloit; 4th Dist., W. Cunningham - Platteville; TERM EXPIRES 1918: 5th Dist., W. F. Zierath - Sheboygan; 6th Dist., H. W. Abraham - Appleton; 7th Dist., Edward Evans - LaCrosse; 8th Dist., T. J. Redelings - Marinette; TERM EXPIRES 1919: 9th Dist., Joseph Smith - Wausau; 10th Dist., R. U. Cairns - River Falls; TERM EXPIRES 1922: 11th Dist., J. M. Dodd - Ashland; 12th Dist., D. J. Hayes - Milwaukee

Delegates to American Medical Association

H. M. BROWN, Milwaukee; ROCK SLEYSER, Waupun; C. H. LEMON, Milwaukee

Alternates

W. E. BANNEN, LaCrosse; T. W. NUZUM, Janesville; WILSON CUNNINGHAM, Platteville

Committee on Public Policy and Legislation

EDWARD QUICK, Milwaukee, Chairman; J. P. McMAHON, Milwaukee; L. H. PRINCE, Madison

Committee on Medical Defense

G. E. SEAMAN, Milwaukee, Chairman; S. S. HALL, Ripon; A. J. PATEK, Milwaukee

Committee on Health and Public Instruction

SPENCER BEEBE, Sparta; J. M. BEFFEL, Milwaukee; EDWARD EVANS, LaCrosse

Program Committee

MEDICAL SECTION: L. M. WARFIELD, Milwaukee, Chairman; J. S. EVANS, Madison, Secretary; SURGICAL SECTION: EDWARD QUICK, Milwaukee, Chairman; DANIEL HOPKINSON, Milwaukee, Secretary; EYE, EAR, NOSE, THROAT SECTION: S. S. HALL, Ripon, Chairman; JOS. BELLIN, Green Bay, Secretary

The Wisconsin Medical Journal, Official Publication

LIST OF EXECUTIVE OFFICERS OF COUNTY MEDICAL SOCIETIES.

Table with 3 columns: County, President, Secretary. Lists 90 counties and their respective officers.

SOCIETY PROCEEDINGS

COLUMBIA COUNTY SOCIETY.

The regular meeting of the Columbia County Medical Society was held on April 17th in the Home Theater in Portage. The Dental Profession of the county was invited for this meeting and a good attendance was present. After the reading of the minutes, a fee schedule for indigents of the county was adopted upon a request from the county's poor commissioners.

Dr. G. A. Steele of Poynette upon presentation of a transfer card from Green Lake County was admitted to membership.

Dr. Geo. V. I. Brown of Milwaukee gave an excellent address on "Some pathologic and surgical principles which are important to both physicians and dentists, with particular reference to focal infections and the correction of facial and oral deformities" demonstrated with lantern slides.

This address was enjoyed by all present and not only stimulates thoughts along new lines, but will be a direct aid in diagnosis and treatment.

A. F. SCHMELING, *Secretary.*

FOND DU LAC COUNTY

A meeting of the Fond du Lac County Medical Society was held at the Palmer House, April ninth. Captain J. R. Longley, who is stationed at Camp Custer, addressed the meeting. Arrangements were made to attend the funeral of Dr. J. A. Clason in a body.

MILWAUKEE MEDICAL SOCIETY

The regular meeting of the society was held at the Hotel Wisconsin, on Friday evening, April 12th, at 8:30 o'clock.

The following program was presented: "The Relative Toxicity of Various Preparations of Arsphenamine," by Dr. J. C. Sargent. "Blastomycosis," by Dr. Stephen Cahana.

DANIEL HOPKINSON,
Secretary.

LANGLADE COUNTY

A meeting of the Langlade County Medical Society was held at the Elks Club, Antigo, at 4 P. M., April 12th. Dr. D. T. Smith of Neenah, recently returned from France spoke to the society on his experiences. In the evening he addressed a Red Cross meeting in the Armory.

OSHKOSH MEDICAL CLUB

The Oshkosh Medical Club met at the residence of Dr. E. F. Bickel on the evening of April 3rd. Dr. Elizabeth Wood of Madison, state psychologist, spoke on "Diagnostic Methods of Detecting Mental Abnormality."

NEWS ITEMS AND PERSONALS.

The Colby Medical Association has started the erection of a second story to its building in the west ward. The upper floor will provide them with an operating room and several rooms for the accommodation of patients before and after operation.

Dr. C. D. Partridge, instructor in the department of bacteriology and pathology of Marquette University, has been appointed by Dr. Geo. C. Ruhland, health commissioner, as successor to Dr. E. V. Brumbaugh as pathologist of the health commission.

All compulsory health insurance for workers was condemned unanimously by the Milwaukee County Medical Society at a meeting on April 12. State health insurance, advocated by labor federations and by social service workers throughout America, was denounced as wholesale charity and as Socialist propaganda.

More than 56,000 Milwaukee children are to be weighed and measured in the Children's Year campaign, in order to determine their physical condition. Sixty stations will be established in the schools for the work.

Dr. Franklyn Martin, chairman of the general medical board, Council of National Defense, announces that steps have been taken to bring about the adoption of uniform nomenclature for war diseases and injuries, as a result of a great deal of confusion arising because of different terms used in various medical groups.

Dr. E. T. Ridgeway has been elected as mayor of Elkhorn, Wis.

It appears that the Red Cross has yielded to antivivisectionist pressure and withdrawn its appropriation for biological research.

At a conference recently held, a committee representing the Douglas County Medical Society presented to mayor-elect F. A. Baxter a petition for a change in the organization of the health department in Superior to provide this city with a full time health commissioner, similar to other cities. At present, the department is conducted by Dr. D. R. Searles who is expected to give only part of his time, and it is held by the doctors that the department demands full time.

Figures on the number of communicable diseases in Beloit in 1917 indicate that there were 177 cases of these types of diseases. This is 86 less than during 1916.

Dr. Lois L. Wynkoop of Chicago, chairman of the eugenics committee of the Illinois Congress of Mothers and Parents-Teachers Association, gave an address on the "Psychology of Adolescence" before an audience of Milwaukee mothers and teachers, recently.

Infantile paralysis is gaining an early start in Milwaukee and may be expected to appear in other sections of the state. Radical restrictive measures will be urged everywhere and strict quarantine of cases required.

Miss Kathryn Jensen, the efficient nurse at the Manawa Hospital, Manawa, Wis., has been appointed matron of

a new hospital recently opened at Washington, D. C. She assumed her new duties on May first.

Rev. C. B. Moulinier, regent of the Marquette University School of Medicine and member of the staff of the American College of Physicians and Surgeons, gave an interesting discussion on the problem of national health before a small crowd at the courthouse in Green Bay. He stated that an estimate of forty to fifty-five per cent of those called in the draft have not been able to fill physical requirements, and he urges the standardization of the hospital as a remedy for this state of affairs.

Two new X-ray rooms have recently been installed in the beautiful addition to the St. Nicholas hospital at Sheboygan. The equipment is of the best and this department takes its place with that of any hospital in the country.

Dr. C. F. Lehnkering has returned from Florida and will resume his practice in Darlington.

Several of the public schools in Sauk county have introduced the system of giving every pupil a thorough physical examination at the opening of the school year. The results have been so satisfactory that other schools will take up the plan.

1,509 children under five years of age died in Milwaukee in the year 1917.

City health physician Holt of Beloit recently recommended to the city council the erection of a new municipal isolation hospital and the use of the present isolation hospital by the city as a fresh air home for children or a city tuberculosis sanatorium.

Miss Harriett Ketter has resigned as chief nurse of the child welfare division of the health department and has accepted more remunerative employment.

All of the remaining patients at the Lakeside Hospital, Oshkosh, were removed to St. Mary's Hospital and the Lakeside Hospital closed its career as such, April 22. The institution, which has been sold to the Sisters of the Sorrowful Mother, will be reopened about June 1 under the name of the Mercy Hospital, and between now and then minor changes and improvements will be made in the building.

Dr. O. H. Foerster removed his office May 1 to the Colby-Abbott Building, 445 Milwaukee St., Milwaukee.

Dr. M. D. Bird of Marinette has been appointed county physician of Marinette county for a term of three years.

The new \$200,000 addition to the St. Joseph's Hospital, Marshfield, Wisconsin, is just about completed. The new addition provides for Obstetrical and Isolation departments and will be fitted with the most modern equipment throughout. In connection with the opening of the hospital, a training school for nurses will open June 1.

The Surgeon General's office is urging that medical schools run on the continuous session plan as soon as

practicable because of the great need for graduates in medicine.

The city council of New London has named Dr. J. Y. Potter as a successor to Dr. A. L. C. Borchardt, former city physician, who has received a captain's commission and gone to the medical training camp at Ft. Riley.

President Wilson's request for nationwide co-operation to save babies is being complied with, so far as Milwaukee county is concerned. The Children's Year committee of the defense council has held its first meeting and has organized for the first steps in the work with Health Commissioner George C. Ruhland as chairman.

MARRIAGES

Dr. Oscar Lotz, Milwaukee, to Miss Gertrude Knowlton, Milwaukee.

Dr. Paul H. Rupp, Milwaukee, to Miss Clarice Engh, Milwaukee.

DEATHS

Dr. Arthur Hansen died April 10th at his home, 40 Greenfield Ave., Milwaukee, at the age of thirty years.

Dr. A. J. Rodman of Delavan died on March 29 of heart failure. He was born in County Seohara, New York, May 22, 1830, and spent his boyhood days on a farm. He was educated at Charlotteville Seminary and graduated from Union College, Schenectady, N. Y., and also from Rush Medical College, Chicago, in 1857. After coming west he practised medicine in Darien for several years, later removing to Delavan, where he has enjoyed a wide practice.

Dr. C. L. Cain of Elmwood died in St. Paul, April 19, 1918, of heart disease. He enlisted in the Medical Reserve Corps at the beginning of the war but was honorably discharged later on account of physical disability.

Dr. Jesse A. Clason died at his home in Fond du Lac, April 7, of heart disease. He was born October 15, 1860, at Clason Prairie, Wisconsin. He graduated from the Missouri Medical College, St. Louis, in 1882 and in 1905 took special courses at the Rush Medical and Chicago Polyclinic Colleges. In 1897 he was a member of the Assembly and won prominent notice through his famous measure "The Medical Bill" which later became a law.

Dr. Jennie Lambach died April 9, 1918, at her residence, 104 Farwell Ave., Milwaukee.

CORRESPONDENCE

THE DOCTOR AND THE INSURANCE COMPANIES.

It will probably interest those readers of the Journal who have followed the articles with the above heading appearing in the February, March, and April numbers,

panies is, to avoid payment of physicians for filling out the blanks for settlement of claims against the insurance companies for indemnity to those who have been to know what the latest dodge of the insurance com-insured.

In order to secure the signature of the physicians without payment, some of the companies have been having the blanks filled in at their offices, and then sending these blanks to the physicians asking them to sign the blank, and return same to the company. Of course as might be expected, the companies do not enclose postage for the return.

It seems incredible that the insurance companies should imagine that medical men are so ignorant as not to know that such a document as one of these

reports, is a legal document; which when signed, places a huge responsibility upon the shoulders of the man signing it. Furthermore, no self-respecting medical man can sign such a document without looking into his records and making sure that the statements are honest and correct. Under any circumstances no honest physician should ever put his name to any such document without remuneration from the insurance company, if for no other reason than that he cannot honestly do so without assuming great responsibility, and without giving time and labor in assuring himself of the truth of the statements to which he affixes his signature.

Don't do it without being properly paid for the responsibility and labor incurred by the insurance company which is the only party to the transaction that derives a benefit.

H. M. BROWN.

MEDICAL MOBILIZATION AND THE WAR

A CALL TO THE WISCONSIN PROFESSION.

WAR DEPARTMENT.

OFFICE OF THE SURGEON GENERAL.

WASHINGTON.

Apr. 8, 1918.

From: The Surgeon General,
To: Editor, Wisconsin Medical Journal,
Milwaukee, Wisconsin.
Subject: Medical Reserve Corps.

1. I wish to call to the attention of the professional at large the urgent need of additional medical officers. As the war progresses the need for additional officers becomes each day more and more apparent. Although the medical profession of the country has responded as has no other profession, future response must be greater and greater. The Department has almost reached the limit of medical officers available for assignment.

2. I am, therefore, appealing to you to bring to the attention of the profession at large the necessity for additional volunteers. So far the United States has been involved only in the preparatory phase of this war. We are now about to enter upon the active, or the fighting phase, a phase which will make enormous demands upon the resources of the country. The conservation of these resources, especially that of man-power depends entirely upon an adequate medical service. The morning papers publish a statement that by the end of the year a million and a half of men will be in France. Fifteen thousand medical officers will be required

for that army alone. There are today on active duty 15,174 officers of the Medical Reserve Corps.

3. Within the next two or three months the second draft will be made, to be followed by other drafts, each of which will require its proportionate number of medical officers. There are at this time on the available list of the Reserve Corps, an insufficient number of officers to meet the demands of this draft.

4. I cannot emphasize too strongly the supreme demand for medical officers. Will you give the Department your assistance in obtaining these officers? It is not now a question of a few hundred medical men volunteering for service, but it is a question of the mobilization of the profession that in the large centers of population and at other convenient points as well as at all Army camps and cantonments, boards of officers have been convened for the purpose of examining candidates for commission in the Medical Reserve Corps of the Army. An applicant for the Reserve should apply to the board nearest his home.

5. The requirements for commission in the Medical Reserve Corps are that the applicant be a male citizen of the United States, a graduate of reputable school of medicine, authorized to confer the degree of M. D., between the ages of 22 and 55 years of age, and professionally, morally and physically qualified for service.

6. With deep appreciation of any service you may be able to render the Department, I am

F. C. GORGAS,

Surgeon General, U. S. Army.

A CALL FOR FIVE THOUSAND MORE MEDICAL OFFICERS.

If there is any one lesson that this war has taught the world it is that of preparedness. If it were not that it stands for a principle which is axiomatic, the reiteration of the word "preparedness" would become monotonous. As it is, the tremendous importance of the principle undoubtedly has prompted the appeal of the Surgeon-General, which appears above for five thousand more volunteers for the Medical Reserve Corps. At present there are approximately 18,300 members in the Corps and in addition, about 1,500 physicians have been offered commissions who have not yet accepted. Thus there is a sufficient number for present needs and for the immediate future. But it is the ultimate future—it is what may develop in four, in eight, in twelve, in eighteen months for which preparations must be made. It will be noticed that the Surgeon-General calls for five thousand more volunteers for the Medical Reserve corps *now*. The call is made on the organized profession. It is up to us, to the medical profession of the United States, to respond to this call—the call of our government, of our country. The Association is preparing, and has about ready for publication, a survey of the response the medical profession has already made. This survey will show in what states, in what counties and in what communities the profession has shown its patriotism and its self-sacrificing spirit in responding, and in which communities it has lagged behind. *The organized profession will respond to the call of the Surgeon-General!* So far as possible the response must be made with the consideration of the actual needs of the public—not as expressed by the individual physician himself, but by the profession as a whole in his community, county and state. Preparations are already in the making for conducting the "drive" for this new increment of five thousand physicians. Let every reader ask himself the question: Is it my duty to volunteer? And then let him answer it honestly!

OBSERVATIONS OF A WISCONSIN MEDICAL OFFICER IN FRANCE.

In response to a request to send home some observations on his work in France, Captain J. L. Yates, a Milwaukee surgeon and member of this Society, assigned as assistant to the Director Divi-

sion of Surgery, American Expeditionary Forces, has incorporated the following in a letter to the secretary. He has asked that it be edited, if published, and given "the polish needed". We like it just as it reads and feel that any attempt to "polish" it could but result in spoiling one of the best articles on the subject we have read.

"I am going to give you a series of bold statements which you can recast to give connection and to which you must give the polish needed to make readable.

I. A proper attitude of the individual toward the game is a basic necessity. Like a successful ball team, no single performer, however brilliant, will add strength to the organization if he will not co-operate cheerfully. Medical men who "join up" for foreign service are not merely doing a duty. They are matriculating in a type of national university which will give privileges and opportunities from which will come benefits beyond anything hitherto available.

II. These benefits will be directly proportional to individual ability to submerge self for the good of the entire organization and willingness to work joyfully at any job assigned. Round plugs fit square holes no better than in civil life but as in civil life the bigger the plug the larger the hole it can fill and readjustment will care for the shaping. This is purely an organization problem. In no organization can little or ill-fitting plugs maintain a high position—vice versa.

III. In general the work of medical officers can be along one of two lines, administrative and professional. So few can do both well that this makes a natural line of cleavage. The officers of the Regular Army are to a large extent the administrators though they must make selections from the M. R. C. to give them the help required by the enormous job ahead. With this exception no individual can be a just judge of the work he is best suited to do for the greatest good of the Big Scheme. This principle applies in the first instance to the decision as to whether to go or to stay at home. None able to carry on active work at home can escape the manifest duty of doing at least that much in France, unless disqualified physically or by the greater relative importance of the home job. Neither of these questions can be settled honestly by the individual concerned nor by any group of individuals which does not recognize the truth.

IV. Preparation can be divided into two parts (1) physical and (2) professional.

1. None can be too fit physically. The strange climate, the contact with strains of bacteria to which we are not accustomed and the lack of certain luxuries known to us as necessities make for a high morbidity among the unfit who thus become a burden. The strain of work during periods of increased military activity is severe and relentless but the strain of the longer periods of inactivity and readjustment is even greater.

2. Each should remember he is going to school again. This university is practically unsuited to those who have an excess of insoluble calcium in the walls of their cerebral vessels. Come prepared to learn.

V. Without having seen and seen recently the best work done by *all* the Allies none can know what the service in the U. S. Army Medical Corps is going to be. The best methods judged upon the grounds of simplicity and practicability will be adopted and adapted to our needs as a base line of excellence. Reliance can be placed upon the ingenuity, open mindedness and powers of observation of the American Medical Profession to develop these methods and to devise others.

VI. Over much that has been and is being written on war surgery has been based upon insufficient data and observation. Even more is obsolete when it is printed. This makes it impossible to advise any systematic study. The fundamental principles of physiology, pathology and bacteriology and surgery have been upset by this war no more than have the laws of gravitation. The rational application of these principles to the problems of the war constitutes the best there is in military surgery. Too much anatomical knowledge is not yet recorded.

VII. A military hospital is no different from a civil hospital fundamentally. There is a noticeable variation in location, construction and size of the buildings, in the style of clothing of the personnel, in the very large proportion of young male patients suffering from injuries. But the end in view is the same. The discovery and application of the best therapeutic measures leading to the most complete recovery in the least time. Anything not calculated to attain these ends is even more vicious in the military organization because in addition to the wrong done to the patients as individuals there is a real obstruction to winning

the war at the least cost in life, limb, time, effort and money.

VIII. The medical and laboratory sides of the problem, no less important because less dramatic, are not presented on account of less direct information. It may be stated that the heads of these departments are working along similar lines and are co-operating in every particular.

IX. Departmentally and individually there is manifest the practical realization that the Medical Reserve Corps is in this game with but one purpose—to help win the war. No credit, no glory, no advancement is desired, except as a part of military organization it is requisite to have suitable authority. All we ask is the chance to express in the care of our sick and wounded and in the inevitable addition to knowledge the best, broadest and highest of medical ideals. There is only one way to make this appeal irresistible: Come, work, take the job seriously, not self.

Wisconsin's responses in contributions of men, labor and money have given final reply to those who doubted her loyalty. Everyone who has aided in any way the work that has been done deserves credit and none more than yourself. But the one who is working for credit is in the wrong show. Indeed, one might paraphrase Mr. Kipling:

Only our conscience shall praise us, and only our conscience shall blame.

No one shall work for glory, and no one shall work for fame.

But each for the joy of helping shall do the duty nearest at hand,

That justice and peace and mercy shall rule on the sea and the land."

Sincerely yours,

J. L. YATES,

Assistant to the Director, Div. of Surgery.

THE EXPLOSIVES REGULATION LAW.

The law regulating the manufacture, distributing, storing, using or possessing explosives, blasting supplies or ingredients became effective November 15th, 1917. The purpose of the law is to prevent disloyal persons from procuring explosives or their ingredients and to keep them out of the hands of persons who will not protect them carefully enough to prevent them from being stolen or used for unlawful purposes. The application of the law was at first confined to manufacturers and users of nitro-glycerine, dynamite, gun cotton, gun powder, blasting powder and all other explosives or their ingredients. A later ruling of the Department of the Interior, under whose direction the law is being enforced, defined "ingredients" to cover any of the following when sold or used in quantities of **one ounce or more:**

Bichromates: Ammonium, Potassium, Sodium.

Chlorates: Barium, Potassium, Sodium, Strontium.

Chromates: Ammonium, Barium, Calcium, Chrome Green, Chrome Yellow, Lead, Potassium, Sodium.

Nitrates: Ammonium, Barium, Copper, Ferric, Lead, Magnesium, Nickel, Potassium, Silver, Strontium.

Nitric Acid: Aqua Fortis, Fuming, Nitric acids of all grades and strengths. Mixed acids.

Perchlorates: Perchloric Acid, Potassium.

Perborates: Magnesium, Sodium, Zinc.

Permanganates: Calcium, Potassium, Sodium.

Peroxides: Barium, Calcium, Magnesium, Oxon (cubes and cartridges), Sodium, Strontium, Zinc.

Phosphorus:

It will be noted by a perusal of the above list that every druggist, physician, painter, butcher, photographer, manufacturer, electrician, engraver, and in fact every person who has in his possession any one of the listed ingredients in amounts of one ounce or more is required to procure a federal license. There has been appointed in each county throughout the state a licensing officer, usually the County Clerk, who issues the following form of license.

(b) Vendor's License—Authorizing the purchase or possession of explosives or ingredients for sale to others.

(c) Purchaser's License—Authorizing the purchase or possession of explosives or ingredients for use and permits their possession and use, but does not authorize the holder to sell to others.

(d) Foreman's License—For every foreman, chemist, etc., who purchases or receives from his employer, explosives or ingredients for sale or issuance to workmen under him.

(g) Analyst's, Investigator's and Inventor's Licenses—Authorizing the purchase, manufacture, possession, testing or disposing of explosives or ingredients for the purposes indicated by the license name.

The word "person" is construed as meaning individual citizen, firm, corporation, institution, hospital, municipality, association or society.

Every applicant for a license must appear in person before the licensing officer. In the case of a firm, corporation, institution or similar body applying for a license an officer of such concern must appear in person. An application properly filled out must be signed and sworn to by the applicant before the licensing officer.

A license will not be issued to an enemy alien, or to a subject of a country allied with an enemy of the United States, or to a corporation, firm, or association whose controlling stockholders are enemy aliens or subjects of a country allied with an enemy of the United States. Licenses issued by local licensing officers are good only in the state in which they are issued. An application should be made to the nearest licensing officer, not necessarily in the applicant's home county, but at the most convenient place.

Every person using explosives or ingredients must keep a record of the amount purchased, used and still on hand.

A license issued to an employe of a firm, corporation or institution as foreman is good only during the term of employment and such license must be returned to the licensing officer at the time when such employe severs his connection with such firm, corporation or institution.

A license is not transferable and can be used only by the person to whom issued.

Every manufacturer, dealer or other person selling explosives or ingredients, shall, if the purchaser appears in person, require the presentation of the license under which the purchase is made; or if the order is received by mail, telephone, etc., he shall require a certified copy of the purchaser's license to be on file in his office.

The fee for every license and for every certified copy thereof is twenty-five (25) cents.

Approved October 6, 1917.

"The state inspector for Wisconsin is Joseph M. Guidice, Schleisingerville, Wis."

A LETTER FROM CAPTAIN WILKINSON

Captain M. R. Wilkinson, M. R. C., Councilor of the First District, who enlisted in the Medical Reserve Corps at the beginning of the war, has written us from the U. S. Army General Hospital Number 16, New Haven, Connecticut, where he has recently been assigned. He requests that his Journal be sent to him at that address.

Captain Wilkinson states that the Hospital at New Haven was built from a donation for Yale and that a million and a half dollars has been spent in its construction. The U. S. government rented it just as it was being completed. Major Foster, formerly in charge of Cragmoor Sanitarium at Colorado Springs, is in charge.

One hundred and twenty-five patients are housed in temporary buildings and the capacity will shortly be enlarged to five thousand. Seventeen medical officers are assigned to the Hospital and twenty-five nurses. Captain Wilkinson predicts that this will be one of the best equipped institutions in the country.

MEDICAL SURVEY OF STATE

A survey of the medical resources of Wisconsin is being made by the Wisconsin Committee, Medical Section, Council of National Defense. Questionnaires have been mailed to all physicians in the State, which will determine their qualifications for service, their availability and what hardship it will work on the communities they serve in case they leave. The data gathered will be tabulated for each County and corrected by the Auxiliary County Medical Defense Committees.

When completed, this survey will show the men in active service, men holding commissions and awaiting call, men physically disqualified, men over age and those remaining who are available for military service.

Lieut. Rock Sleyster, M. R. C., Secretary of the Committee, has been ordered to Chicago to attend a conference of secretaries of State Medical Societies and from there to Washington to attend a conference held by the Council of National Defense, May 4th and 5th. What work or action will be taken on completing the survey will be determined at these conferences.

WAR NOTES

Forty-five nurses of Milwaukee Base Hospital Number 22, stationed at the Auditorium, left April 4th for U. S. Army General Hospitals to take a course in training for military training preparatory to service abroad. Miss Stella Matthews is in charge of the unit.

Surgeon General Gorgas has issued a call for 5,000 additional medical officers and Surgeon General Braestad of the Navy has asked for 2,000 additional members for the Naval Reserve Corps.

Of 1,426 men examined for the Navy in the Milwaukee recruiting station, 206 were rejected for defective vision, 53 for bad teeth, 40 for flat feet and 30 for defective hearing.

A committee of women physicians in the State has begun a drive for \$200,000 for the work of the American women's hospitals abroad. The members of the committee are Doctors Edith McCann, chairman, Kate Dohearty, Ida L. Schell, Harriet L. Post and Helen Addenbrooke.

Captain E. P. Webb of Beaver Dam was presented with a wrist watch on leaving home for Fort Riley by the members of the First Baptist Church.

The dentists of Wisconsin, working under the direction of Dr. Edwin A. Geilfuss of Milwaukee, have offered to do the necessary dental work for registrants in Class A under the draft. This is a splendid work for which the dental profession of Wisconsin should receive credit and it has been recognized by the election of Dr. Geilfuss as dental member of the Wisconsin Committee of National Defense.

Lieut. George W. Harrison of Ashland, who is stationed at Waco, Texas, recently rescued a private of the 352d Aero Squadron from drowning, risking his own life in performing this act of heroism.

The medical schools have received an urgent letter from the War Department concerning the rating of Medical students and the great need of more graduates in medicine. It is requested that students be divided into two groups, those who are likely to become efficient medical officers and those lacking the professional ability or personal qualifications. It is reported that medical schools will undoubtedly be urged to run in continuous session during 1919.

On April 15th Surgeon Minter of the U. S. Navy was at Marquette to examine a number of senior students for immediate enrollments for assistant surgeons in the Naval Reserve Corps.

Dr. J. A. E. Eyster of the Medical School of the University of Wisconsin is in Washington working on oxygen masks. This is the second time this year that Dr. Eyster has been called to Washington for special service.

Miss Anna Swenson, visiting nurse at Marinette, has volunteered for service abroad and will leave Chicago

shortly in the khaki uniform of the Salvation Army nurses.

The Marquette University School of Medicine will give a short summer course in laboratory work.

Captain Carl C. Vogel of Elroy, stationed at Camp Custer, has been commissioned a Major. This is an example of rapid promotion. Dr. Vogel enlisted as a lieutenant in June, 1917, was made a captain in October and received his Majority in February. It should be an answer to the man who refuses to accept a Lieutenant's Commission, and a man may well be proud of advanced rank when awarded as a promotion for merit. Men who can "deliver the goods" need not hesitate to accept a Lieutenancy.

RECENT ORDERS ISSUED TO WISCONSIN PHYSICIANS IN SERVICE

To Camp Crane, Allentown, Pa., base hospital, from Newport News, Lieut. Charles B. Rydell, Superior.

To Camp Devens, Ayer, Mass., to examine the command for mental and nervous diseases, from Camp Devens, Lieut. Charles C. Rowley, Winnebago.

To Camp Forrest, Chickamauga Park, Ga., for duty, from Fort Oglethorpe, Capt. Harry C. Mix, Green Bay.

To Camp Gordon, Atlanta, Ga., to examine the command for mental and nervous diseases, from Camp Joseph E. Johnston, Lieut. William J. Fleming, Wauwatosa.

To Camp Upton, Long Island, N. Y., for duty, from Fort Riley, Capt. Conrad W. Wilkowski, Chippewa Falls.

To Camp Wadsworth, Spartanburg, S. C., base hospital, Lieut. Erwin G. Linkman, Milwaukee.

To Camp Zachary Taylor, Louisville, Ky., for duty, and on completion to his proper station, Major Nelson M. Black, Milwaukee.

To Chicago, Ill., Northwestern University Dental School, for inspection and instruction, and on completion to Toledo, Ohio, for inspection, and on completion to his proper station, Major Robert H. Ivy, Milwaukee.

To Fort Leavenworth, Kans., for duty, from Fort Riley, Lieut. Alexander J. Berger, New Holstein.

To Fort Riley for duty, from Fort Riley, Lieuts. Charles M. Griswold, Alma Center; Russell R. Heim, Marinette. For instruction, Lieuts. William F. Baker, Birnamwood; Peter L. Scanlan, Prairie du Chien; Francis J. Broghammer, Superior.

To Jefferson Barracks, Mo., for duty, Capt. Norman E. McBeath, Livingston.

To Lakewood, N. J., for duty, from Ann Arbor, Capt. Oscar C. Wilhite, Lake Geneva.

To New York City, Cornell Medical College, for instruction, in military roentgenology, from Fort Riley, Lieut. Joseph C. Baird, Eau Claire.

To Rockefeller Institute for instruction in laboratory work, and on completion to Army Medical School for duty, from Army Medical School, Lieut. Henry F. Hoesley, Shullsberg.

To San Francisco, Calif., for instruction, and on completion to his proper station, from Camp Cody, Lieut. Clark O. Decker, Crandon.

Honorably discharged on account of physical disability existing prior to entrance into the service, Lieuts. Clark L. Cain, Elmwood; Dana B. Dishmaker, Kewaunee.

To Camp Grant, Rockford, Ill., base hospital, from Camp Dodge, Lieut. Donne F. Gosin, Green Bay.

To Camp Wheeler, Macon, Ga., as orthopedic surgeon, from Fort Oglethorpe, Lieut. Bernard O. Bendixen, Kewaskum.

To Fort Oglethorpe for instruction, Capt. Anfin Egdahl, Menomonie; Lieut. Charles E. Stolz, Milwaukee.

To Fort Riley for instruction, Lieut. Carlton M. Beebe, Sparta.

To Mineola, Long Island, N. Y., for duty, from Fort Riley, Lieut. Harold McM. Helm, Beloit.

To New Haven, Conn., for duty, from Fort Oglethorpe, Capt. Michael R. Wilkinson, Oconomowoc.

Honorably discharged on account of physical disability existing prior to entrance into the service, Capt. Charles A. Critchlow, Mellen.

ORDERED INTO SERVICE

To Fort Riley—

D. W. Lynch, West Bend.
Geo. E. Lindow, Watertown.
E. L. Schroeder, Shawano.
H. M. Ripley, Kenosha.
C. M. Beebe, Sparta.
E. I. Moquin, Fairwater.
E. P. Webb, Beaver Dam.
W. F. Baker, Birnamwood.
H. Kalling, Black River Falls.

To Jefferson Barracks—

L. M. Warfield, Milwaukee.

RECOMMENDED FOR COMMISSIONS

George M. Smith, Chippewa Falls, 1st Lieut.
John E. B. Ziegler, Eau Claire, 1st Lieut.
Frank A. Bueckmann, Greenwood, 1st Lieut.
Earl L. Baum, 499 Hanover St., Milwaukee, 1st Lieut.
Emil H. Sutter, 493 11th Ave., Milwaukee, 1st Lieut.
Walter Van de Erve, Montello, 1st Lieut.
Herbert C. Dallwig, Wauwatosa, 1st Lieut.
H. F. Walters, 264 Palace Bldg., Milwaukee, 1st Lieut.
Carlton B. Gressom, La Crosse, 1st Lieut.
R. B. Quinn, Darlington, 1st Lieut.

If the hairs of an ass that are near to his penis be taken, and these be given to anyone, broken small, in any drink or wine, then shall he be eased at once of all flatulence.—*Alb. Mag.*

CAMPETRODIN AND CAMPETRODIN No. 2.

REPORT OF THE COUNCIL ON PHARMACY AND CHEMISTRY.

The following report on Campetrodin and Campetrodin No. 2 has been adopted by the Council and its publication authorized.

W. A. PUCKNER,
Secretary.

The following report of the A. M. A. Chemical Laboratory on "Campetrodin" and "Campetrodin No. 2," sold by the A. H. Robins Company, Richmond, Va., was submitted to the Council by a referee of the Committee on Pharmacology:

Campetrodin and Campetrodin No. 2, Double Strength, are called "ethical medicinal specialties" by the A. H. Robins Company, Richmond, Va., which sells them. An advertisement in the *Maryland Medical Journal* (December, 1917) contains the following claim for composition:

"Campetrodin (Made in Two Strengths of Iodine). This preparation is an Oleaginous Solution of Iodine in Camphor."

A booklet describing the "specialties" of the Robins Company contains the following in reference to Campetrodin: "Composition: Camphor, Iodine Element, Oleaginous Solvent." From this it appears that the preparations are claimed to contain elementary (free) iodine in an "oleaginous solvent." Since free iodine, as is well known, readily combines with fats, it was decided to determine the form in which the iodine was present in these preparations. The examination demonstrated that both preparations contained but a trace of free iodine. On steam distillation there was obtained from both preparations a distillate amounting to about 35 per cent by volume which had an odor strongly suggestive of turpentine, while the residue contained the iodine and had the characteristics of an iodized fatty oil.

Quantitative determinations indicated that Campetrodin contained approximately 0.03 per cent of free iodine and 1.3 per cent of iodine in combination with the fatty oil. Campetrodin No. 2, Double Strength, contained approximate 0.03 per cent free iodine and 2 per cent of iodine in combination with the fatty oil.

Thus, contrary to the published statements, Campetrodin is *not* a preparation of free (elementary) iodine and Campetrodin No. 2, Double Strength, does *not* contain twice as much iodine as Campetrodin.

The report of the Chemical Laboratory shows that the statements made in regard to the composition of Campetrodin and Campetrodin No. 2 are incomplete in some respects and false in others. In view of the Laboratory's findings it appears superfluous to inquire into the therapeutic claims made for the preparations: It is evident, however, that a solution containing practically no free iodine is not, as claimed by the Robins Company, "adapted for use wherever . . . iodine is indicated externally. . . ."

It is recommended that Campetrodin and Campetrodin No. 2 be declared inadmissible to New and Nonofficial Remedies because of false statements as to chemical composition and therapeutic action, constituting conflicts with Rules 1 and 6.

The Council adopted the recommendation of the referee and authorized publication of this report.

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Is Everywhere!

Climate is No Specific, modern physicians universally recognize. It is the proper use of the conditions to which the patient is accustomed that brings back health.

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because it inflicts no radical change upon the delicate organisms of the diseased patient. It rejects the "change of climate" theory as unnecessary, if not ill-advised. It leaves the patient to live where a living can be earned.

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Interested physicians should have our literature at hand.

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SHOREWOOD, MILWAUKEE, WISCONSIN
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IDEAL location, quiet and restful surroundings. Every modern appurtenance for scientific diagnosis, and treatment. Absolute freedom from contact between Mental and Non-mental cases. Privilege extended to the Medical Profession to prescribe for and direct treatment of private cases, under similar conditions as obtain in a general hospital. For catalogue or further information address

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F. C. STUDLEY, M. D., Superintendent
L. W. DUDLEY, M. D., Resident Physician

CHLORETONE: SUGGESTIONS FOR DOSAGE.

For its hypnotic effect Chloretone may be administered in doses sufficient to produce the desired result without endangering the life of the patient. As one writer points out, it is useless to expect to attain that end by giving the patient small doses—5 grains—at long intervals—three times daily. In general, a single dose, of 5 to 20 grains, will have the best effect. It would be well to give about 10 grains the first night, 15 the second, and 20 grains the third. When a dose is found that produces the desired result, the same dose may be repeated until the "sleep habit" has become established, when it should be reduced gradually.

When the use of Chloretone must be continued for a protracted period, as in the treatment of epilepsy, its effects should be watched lest a cumulative action manifest itself. It should not be pushed to the point of dullness and drowsiness.

As a sedative in asthma, chorea, pertussis, nausea, emesis gravidarum, and seasickness, doses of 3 to 10 grains, at stated intervals according to the effect, are generally sufficient. As a preventive of post-anesthetic nausea the administration of ether, is the usual practice.

The principal effects of Chloretone are manifested upon the central nervous system. It acts like other hypnotics, but, unlike most of the latter, it does not depress the circulatory system, nor does it disturb digestion.

Chloretone is procurable in 3-grain and 5-grain capsules, convenient for administration.

A simple test for acidosis which has been found to be trustworthy in diabetes has been devised by Van Slyke, who is making notable researches in biological chemistry in the Rockefeller Institute for Medical Research. He finds that the sum of the total acidity and ammonia of the urine expressed in c.c. of decinorma solution, give an accurate measure, the milder stages of acidosis in diabetes. In other ailments, he has not found this method so satisfactory. Comparisons of the results of this procedure with those obtained from analysis of the blood, show that in severe acidosis, the results are not quite so trustworthy as in the less pronounced forms. Analysis of the blood is the most accurate of all the methods of determining acidosis, but requires equipment and labor which are not to be had in the ordinary laboratory which is at the service of the physician. Van Slyke, after experimenting with various other tests for acidosis, recommends the one devised by him, when the patient is suffering from diabetes. He has prepared a table for determining the degree of acidosis. The body weight is divided by the number of c.c. of decinormal solution. From 0 to 12 c.c. per pound is normal; 12 to 30, indicated mild acidosis; 30 to 45, moderately severe and above 45, severe.

The **Battle Creek Sanitarium** has recently adopted the Van Slyke method with advantageous results.

A simple and effective remedy for the summer diarrheas and other common ailments of the intestinal canal is the Bulgarian bacillus. This was popularized a few years ago by the late Professor Metchnikoff, who pointed out that this organism, in the form of buttermilk, is extensively used by the Bulgarians, who have the reputation of being the longest lived people in Europe. While this lactic acid organism is not, of course, a panacea for senility, it is a remedy of very great value for many intestinal affections. Clock and others have shown that by its use summer diarrheas of children can be controlled more quickly, and with less disturbance of the child's regular food than with any other remedy. It has also been recommended for intestinal indigestion, autotoxemia of intestinal origin, and even for such serious diseases as diabetes.

It is important to use a culture of the Bulgarian bacillus which you can depend upon. **Galactenzyme (Abbott)** is such a culture. This product is made from the type A organisms, of established virility, under the most careful, aseptic precautions. It is available both in tablet form and in bouillon. For ordinary use the tablets are generally preferred. We recommend a careful trial of **Galactenzyme** in case of summer diarrhea. Now is the time to procure a supply.

BOOKS RECEIVED

BLOOD TRANSFUSION, HEMORRHAGE AND THE ANAEMIAS. By Bertram M. Bernheim, A. B., M. D., F. A. C. S. Instructor in Clinical Surgery, The Johns Hopkins University, Captain, Medical Officers' Corps, U. S. A., Author of "Surgery of the Vascular System," etc. Publishers, J. B. Lippincott Company, Philadelphia and London. Price, \$4.00.

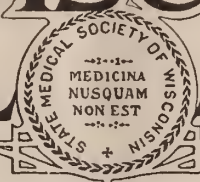
OBSTETRICS. A Text-Book for the Use of Students and Practitioners. By J. Whitridge Williams, Professor of Obstetrics, Johns Hopkins University, Obstetrician-in-Chief to the John Hopkins Hospital, Baltimore, Md. Seventeen plates and 685 illustrations. D. Appleton and Company, New York and London.

Doctor Williams' new edition of his text-book on Obstetrics is an excellent presentation of that large and important branch of medicine. It differs from the former editions only in so far as it brings our knowledge on its various and complex subjects up to the minute and even in a more clear and convincing manner. This new edition will surely take its proper rank as one of the great medical text-books of today, a position occupied by his former literary efforts as well. Personally the writer believes Doctor Williams one of the three greatest teachers and authors on Obstetrics, and his new book should be in every physician's and medical student's library.

F. B. M.

6-21
READ FIRST INSIDE PAGE

THE WISCONSIN MEDICAL JOURNAL



Owned and Published by the State Medical Society of Wisconsin

L. M. WARFIELD, M. D., Editor
J. P. McMAHON, M. D., Managing Editor

VOLUME XVI.
NUMBER 1.

MILWAUKEE, WIS., JUNE, 1917.

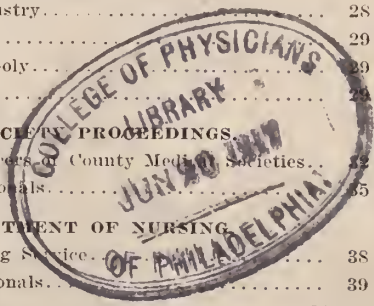
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ORIGINAL ARTICLES.

The Physician: Past and Present, by H. P. Greeley, M. D., of Waukesha	1
Recent Practical Contributions to the Topographical Anatomy of the Heart, by C. R. Bardeen, M. D., of Madison	6
The Regulation of the Heart in Health and Disease, by J. A. E. Eyster, M. D., of Madison	8
Some Practical Considerations in Chronic Heart Disease, by Arthur J. Patek, M. D., of Milwaukee	12
Personal Hygiene for Soldiers, by Gilbert E. Seaman, M. D., F. A. C. S.	22
Duties of Medical Officers at the Front, by James W. Frew, M. D.	25
Results of Examination for the Diagnosis of Gonorrhoea, by Laura Leonard Gilman, of Madison, Wis.	27

EDITORIALS.

New Dangers in Industry	28
Food Conservation	29
The Salvarsan Monopoly	29
Correspondence	6
SOCIETY PROCEEDINGS	
List of Executive Officers of County Medical Societies	32
News Items and Personals	35
DEPARTMENT OF NURSING	
The Red Cross Nursing Service	38
News Items and Personals	39
Book Reviews	31, 40



Continued on Advertising Page XIV

[Entered as second class matter, June 30th, 1903, at the Post Office at Milwaukee, Wis., under Act of Congress March 3rd, 1879.]

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Germicidal Soap, P. D. & Co., is a valuable disinfectant in surgery, in gynecology, in obstetrics, and in routine practice. It cleanses and penetrates at the same time. It is always ready for use. No weighing or measuring is necessary. There is no waste. Hands, instruments and field of operation are quickly disinfected with one material.



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SOME SUGGESTED USES.

- To prepare antiseptic solutions.
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- To cleanse wounds, ulcers, etc.
- To lubricate sounds and specula.
- To destroy infecting organisms in skin diseases.
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- To control the itching of skin infections.
- To make solutions for the vaginal douche.
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- To cleanse the hair and scalp.
- To remove and prevent dandruff.
- To disinfect vessels, utensils, etc.

Germicidal Soap does not attack nickeled or steel instruments. It does not coagulate albumin.

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The outfit complete weighs but 20 lbs. and it is *easily carried* to the patient's home and as *successfully operated* as in your own office.

The High-Frequency Current ranges from the smallest spark to a volume heavy enough for Fulguration work.

The outfit is mounted in a beautiful nickel-trimmed box, 8x12½x6¾". The switch, spark gap and primary coil are mounted on highly polished hard rubber. The outfit will operate equally well with alternating or direct current and is supplied with a cord that allows you to attach it to any lamp socket.

A complete set of five High-Frequency electrodes and handles are mounted in the cover of the case and are furnished with the outfit without additional charge.

An UNCONDITIONAL GUARANTEE of service for one year goes with each outfit. Use it for 30 days, and if you are not satisfied your money will be refunded, or the instrument will be kept in repair for one year without charge.

The Calumet High-Frequency outfit was never sold before at this price. We will accept your order for the next 30 days on the following basis: \$10.00 with the order and \$10.00 when you receive the outfit.

YOUR OPINION IS FINAL as to the merit of the outfit; our guarantee protects you absolutely.



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Chicago Sales Department: 30 East Randolph Street

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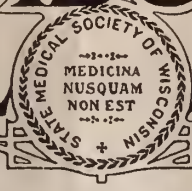
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NUMBER 2.

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ORIGINAL ARTICLES

Pneumonia in Children, by A. W. Myers, M. D., of Milwaukee	41
The Artificial Feeding of Infants, by A. L. Kastner, M. D., of Milwaukee.....	49
Pituitrin in Obstetrics, by E. E. Tupper, M. D., of Eau Claire	56
Laboratory Methods and Their Clinical Application, by W. D. Stovall, M. D., of Madison.....	60
Lactosuria: Case Presenting Unusual Features—Clinical Report, by L. M. Warfield, M. D., of Milwaukee..	63
Special Abstract—Miners' Consumption, by A. J. Lanza, M. D.	61

EDITORIALS

Physicians! Attention!	68
Birth Registration	68

Abuse of Pituitrin.....	69
Training of Attendants for the Sick.....	69
Briefly Stated	70
Book Reviews	67, 71

SOCIETY PROCEEDINGS

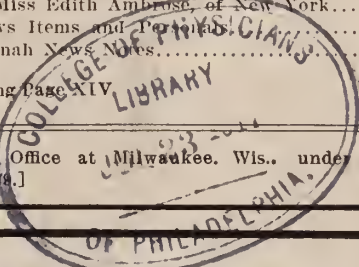
List of Executive Officers of County Medical Societies..	72
News Items and Personals.....	73
Obituary	75

DEPARTMENT OF NURSING

The Shortage of Nurses in Wisconsin.....	77
How and Where Should Attendants be Trained, by Miss Edith Ambrose, of New York.....	77
News Items and Personals.....	77
Neenah News Items.....	78

Continued on Advertising Page XIV

[Entered as second class matter, June 30th, 1903, at the Post Office at Milwaukee, Wis., under Act of Congress March 3rd, 1879.]



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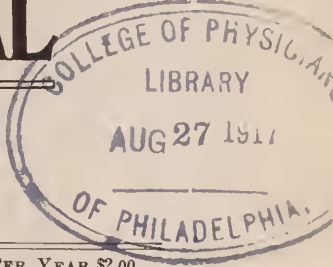
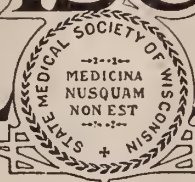
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Superintendent and Resident Physician

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NEXT MEETING OF THE STATE SOCIETY AT MILWAUKEE, OCT. 3-5, 1917

THE WISCONSIN MEDICAL JOURNAL



Owned and Published by the State Medical Society of Wisconsin

L. M. WARFIELD, M. D., Editor
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VOLUME XVI.
NUMBER 3.

MILWAUKEE, WIS., AUGUST, 1917.

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ORIGINAL ARTICLES

The Etiology of Primary Glaucoma, by P. H. Dernehl, B. S., M. D., of Milwaukee..... 79
The Relation of Acidosis to Edema in Pneumonia, by A. B. Schwartz, M. D., of Milwaukee..... 83
Duodenal Ulcer in Infants—Report of 4 Cases—by W. H. Bartraine, M. D., of Green Bay, Wis..... 85
The Clinical Examination in Cases of Focal Infection, by E. G. Nadeau, M. D., of Green Bay, Wis..... 89
Abstracts 92

The Fallacy of Clinical Reports..... 93
Urgent Need for 17,000 More Army Doctors..... 96
Preliminary Program State Medical Society of Wisconsin 97

SOCIETY PROCEEDINGS

List of Executive Officers of County Medical Societies.. 100
News Items and Personals..... 103

EDITORIALS

The Annual Meeting..... 94
Will Our Young Doctors Wait to be Drafted?..... 94
You Must Decide..... 94
Keep the Journal Going..... 95
A Neglected Aid in Diagnosis..... 95
Trench Sanitation 96

DEPARTMENT OF NURSING

Our Present Duty..... 107
A New Movement..... 107
Special Public Health Nursing Problems Likely to be Created by the War, by Mary E. Leut..... 107
News Items and Personals..... 110
Book Reviews 111
Books Received 114

Continued on Advertising Page XIV

[Entered as second class matter, June 30th, 1903, at the Post Office at Milwaukee, Wis., under Act of Congress March 3rd, 1879.]

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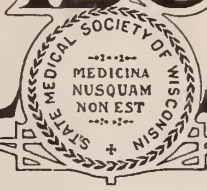
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Owned and Published by the State Medical Society of Wisconsin

L. M. WARFIELD, M. D., Editor
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VOLUME XVI. NUMBER 4. MILWAUKEE, WIS., SEPTEMBER, 1917. PER YEAR \$2.00 SINGLE COPY 25 CENTS

ORIGINAL ARTICLES

Social Service, an Ally of Preventive Medicine, by Agnes L. Murray, of Milwaukee..... 115

Tests for Estimating the Functional Efficiency of Kidneys, by John F. Schneider, A. B., M. D., of Oshkosh, Wis. 119

Outlines for County Medical Meetings, by Edward Evans, M. D., of La Crosse, Wis. 122

The County Society and the Laboratory, by J. M. Dodd, M. D., of Ashland..... 124

Would an Old Age and Disability Pension for Aged and Needy Physicians be Possible, by Rolla W. Cairns, M. D., of River Falls..... 126

Ways and Means of Increasing the Income of the State Society and of Establishing Trust Funds, by T. J. Redelings, M. D., of Marinette..... 128

Special Article—Training in Camp Life, by 1st Lieut. M. R. Wilkinson, M. D., M. R. C..... 130

EDITORIALS

Feeding the Sick..... 132

The Business of the Society..... 133

Concerning Vaccines 133

What Constitutes Prosperity..... 134

Post-Graduate Medical Instruction..... 134

Correspondence 134

Meeting of the Wisconsin Committee of National Defense, Medical Section..... 134

Announcement and Preliminary Program of the State Medical Society of Wisconsin..... 135

The University of Wisconsin, University Extension Division 137

SOCIETY PROCEEDINGS

List of Executive Officers of County Medical Societies.. 140

News Items and Personals..... 141

DEPARTMENT OF NURSING

Editorials 145

Who's Who and Why—The Story of Linda Richards... 145

Women in Industrial Life, by Mr. Frank Wicks, of Milwaukee 144

News Items and Personals..... 149

Book Reviews 150

Continued on Advertising Page XII

[Entered as second class matter, June 30th, 1903, at the Post Office at Milwaukee, Wis., under Act of Congress March 3rd, 1879.]

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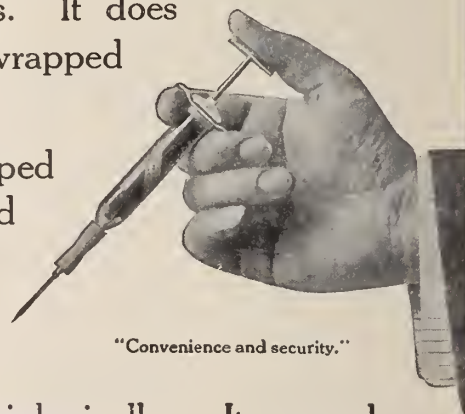
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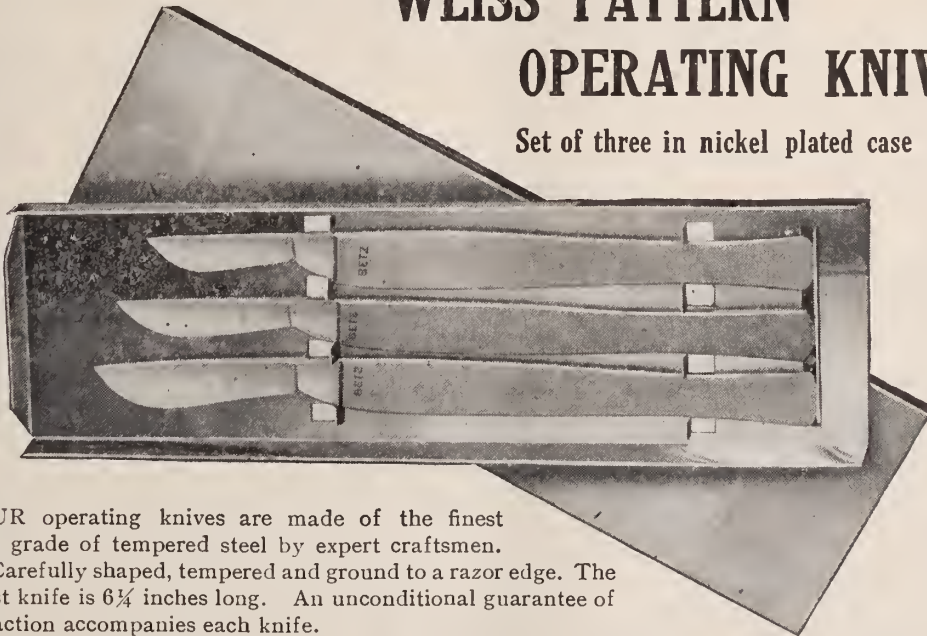
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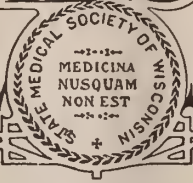
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L. M. WARFIELD, M. D., Editor
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VOLUME XVI.
NUMBER 5.

MILWAUKEE, WIS., OCTOBER, 1917.

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ORIGINAL ARTICLES.

Presidential Address, Wisconsin State Medical Society,
by Hoyt E. Dearholt, M. D., of Milwaukee..... 151

Corrective Surgery of the Anterior Nares, by W. E.
Grove, M. D., of Milwaukee..... 161

Ear Affections and Diabetes, by R. Zimmerman, M. D.,
F. A. C. S., of Milwaukee..... 165

EDITORIALS.

Are You the Man..... 170

Health Conservation..... 170

Common Colds..... 171

Quackery Exposed..... 172

The Annual Meeting..... 172

Correspondence..... 173

SOCIETY PROCEEDINGS.

List of Executive Officers of County Medical Societies.. 174

News Items and Personals..... 176

DEPARTMENT OF NURSING.

Annual Meeting..... 179

Report of State Red Cross Nursing Committee..... 179

Report of Committee on Revision of Constitution..... 180

Report of Delegate to American Nursing Convention
held in Philadelphia, April, 1917..... 181

Report of Delegate to State Federation of Women's
Clubs..... 183

News Items and Personals..... 184

Abstracts..... 184

Book Reviews..... 185

Continued on Advertising Page XII

[Entered as second class matter, June 30th, 1903, at the Post Office at Milwaukee, Wis., under Act of Congress March 3rd, 1879.]

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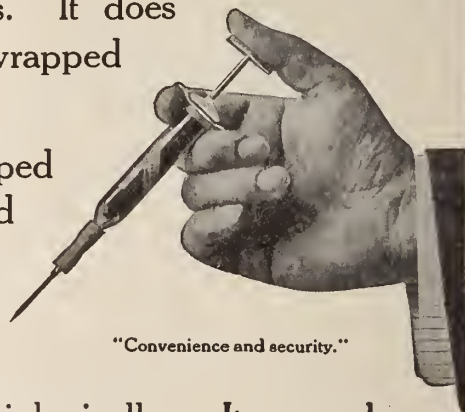
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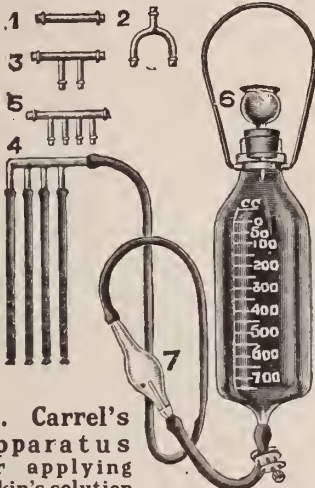
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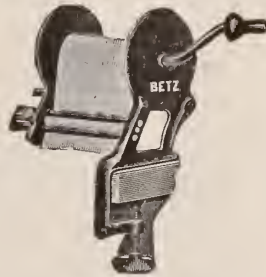
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L. M. WARFIELD, M. D., Editor
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VOLUME XVI.
NUMBER 6.

MILWAUKEE, WIS., NOVEMBER, 1917.

PER YEAR \$2.00
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ORIGINAL ARTICLES.

- Acidosis: From a Physiological-Chemical Viewpoint, by Chester J. Farmer, Milwaukee..... 187
- Tuberculosis and the Draft Examinations, by Oscar Lotz, M. D., of Milwaukee..... 197
- Classification of the Chronic High Blood-Pressure Cases, by Louis M. Warfield, A. B., M. D., of Milwaukee.... 200

- To Officers of the Medical Reserve Corps, U. S. Army Inactive List 211
- Correspondence 212
- Patriot Physicians—List of Members..... 212

SOCIETY PROCEEDINGS.

- List of Executive Officers of County Medical Societies.. 216
- News Items and Personals..... 217

EDITORIALS.

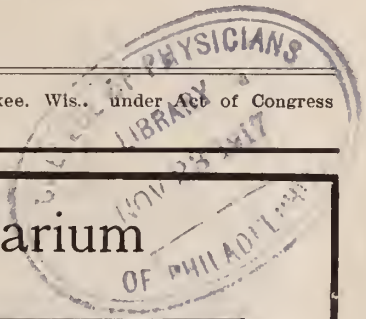
- The Annual Election..... 209
- Young Physicians, Your Opportunity..... 209
- The Doctor's Contribution..... 210
- The Profession Comes Forward..... 210
- Recreation in the Camps..... 210
- Antimeningococcal Serum..... 211
- Patriotism 211

DEPARTMENT OF NURSING.

- Who's Who—Isabel Hampton Robb..... 220
- The Training and the Standardization of the Attendant, by Anna L. Tittman, of Springfield, Ill..... 221
- News Items and Personals..... 220
- Abstracts 206
- Book Reviews 220

Continued on Advertising Page XII

[Entered as second class matter, June 30th, 1903, at the Post Office at Milwaukee, Wis., under Act of Congress March 3rd, 1879.]



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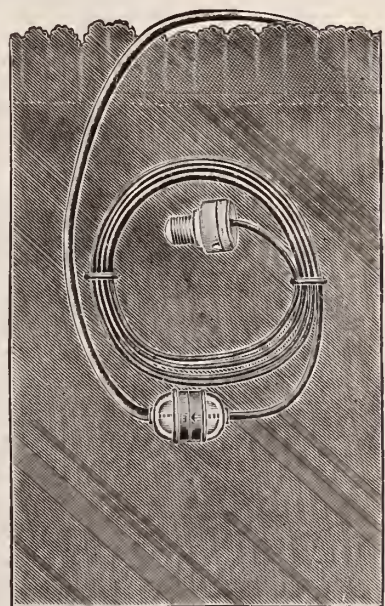
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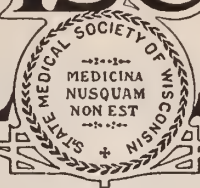
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Superintendent and Resident Physician

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THE WISCONSIN MEDICAL JOURNAL



Owned and Published by the State Medical Society of Wisconsin

L. M. WARFIELD, M. D., Editor

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VOLUME XVI.
NUMBER 7.

MILWAUKEE, WIS., DECEMBER, 1917.

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ORIGINAL ARTICLES.

Address in Medicine—Principles and Possibilities in the Dietetic Treatment of Diabetes, by Frederick M. Allen, M. D., of New York..... 231

A Review of the History of the Disease Now Known as Goitre, by Horace M. Brown, M. D., of Milwaukee 240

EDITORIALS.

Do Your Bit..... 252

Wisconsin in Fourth Place..... 252

German Efficiency 253

The Carrel-Dakin Treatment..... 253

Prussianizing America 254

Patriotism That Pays..... 255

Outdistancing the Quack..... 255

Physicians Wanted 256

Army Surgeons—Note..... 256

Patriot Physicians—List of Members..... 256

SOCIETY PROCEEDINGS.

List of Executive Officers of County Medical Societies.. 258

News Items and Personals..... 259

DEPARTMENT OF NURSING.

Doctors—Aye, and Nurses Too!..... 265

Let's Prove Worthy..... 266

Nurses, Enroll!..... 266

Letters from the Front..... 266

News Items and Personals..... 269

Book Reviews 270

Continued on Advertising Page XIV

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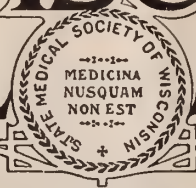
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VOLUME XVI.
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ORIGINAL ARTICLES.

Simulation of Diseases.....	318
Transactions of the Seventy-first Annual Meeting of the State Medical Society of Wisconsin, at Milwaukee, Oct. 2, 3, 4 and 5, 1917—Officers.....	271
Session—October 2, 1917—8 P. M.....	272
Report of Committee on Public Policy and Legislation.....	273
Report of Publication Committee.....	274
Report of Committee on Medical Defense.....	276
Report of Committee on Health and Public Instruction.....	278
Report of Committee on Necrology.....	279
Report of the Committee on Social Insurance.....	280
Report of Delegates to the American Medical Association.....	282
Report of Committee on Medical Education.....	283
Report of Delegates to National Legislative Council.....	284
Treasurer's Report.....	289
Report of the Secretary for the Period of Jan. 1 to Oct. 2, 1917.....	292
Meeting of the House of Delegates, October 3, 1917, 5:45 P. M., at the Auditorium.....	305

Session of the House of Delegates, October 4, 1917, 8:55 A. M.....	307
Session of its House of Delegates, October 5, 1917, 8:45 A. M., Auditorium.....	309
List of Members of the State Medical Society of Wisconsin, 1917.....	311

EDITORIALS.

Simulation of Diseases.....	318
Every Doctor in the Medical Reserve Corps.....	318
Choloroform versus Ether Anesthesia.....	319
Newspaper Medical Advertising.....	319
American Salvarsan.....	320
Nursing Department Discontinued.....	320
Correspondence.....	320
Abstracts.....	322
Patriot Physicians—List of Members.....	324

SOCIETY PROCEEDINGS.

List of Executive Officers of County Medical Societies..	326
News Items and Personals.....	329
Milwaukee Advisory Boards for the State of Wisconsin.	332
Book Reviews.....	334

Continued on Advertising Page XIV

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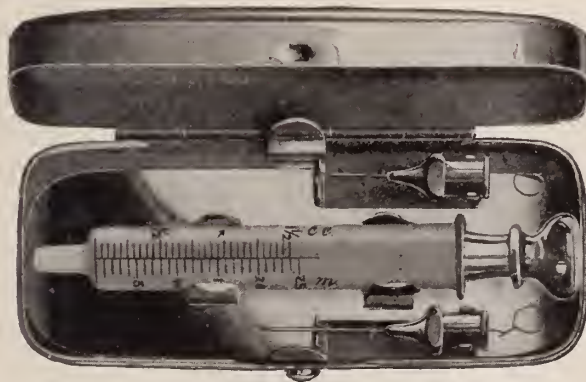
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L. M. WARFIELD, M. D., Editor
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VOLUME XVI.
NUMBER 9.

MILWAUKEE, WIS., FEBRUARY, 1918.

PER YEAR \$2.00
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ORIGINAL ARTICLES.

A Plea for More Thorough Operations on the Biliary Tract, by Daniel N. Eisendrath, A. B., M. D., of Chicago, Ill. 335

Septic Sore Throat—The Galesville Epidemic, by I. F. Thompson, M. D., of Eau Claire..... 342

The Chemical Mechanism of Atrophy, Involution, and Hypertrophy, by H. C. Bradley, of Madison..... 349

Compulsory Health Insurance, by A. E. Forrest, of Chicago 354

Indications for the Davis Cesarean, by R. W. Roethke, M. D., of Milwaukee..... 359

Racine Physicians Attention..... 362

Mobilizing the Profession for War..... 363

Recent Researches upon the Epidemiology of Pneumonia 363

The Needs of the Medical Service..... 365

Accidents from Local Anesthetics..... 365

Conservation in the Prescription..... 365

Correspondence 366

Abstracts 371

SOCIETY PROCEEDINGS.

Pay Your Dues!..... 362

Honor Roll 362

List of Executive Officers of County Medical Societies.. 372

News Items and Personals..... 373

Book Reviews 378

Continued on Advertising Page XII

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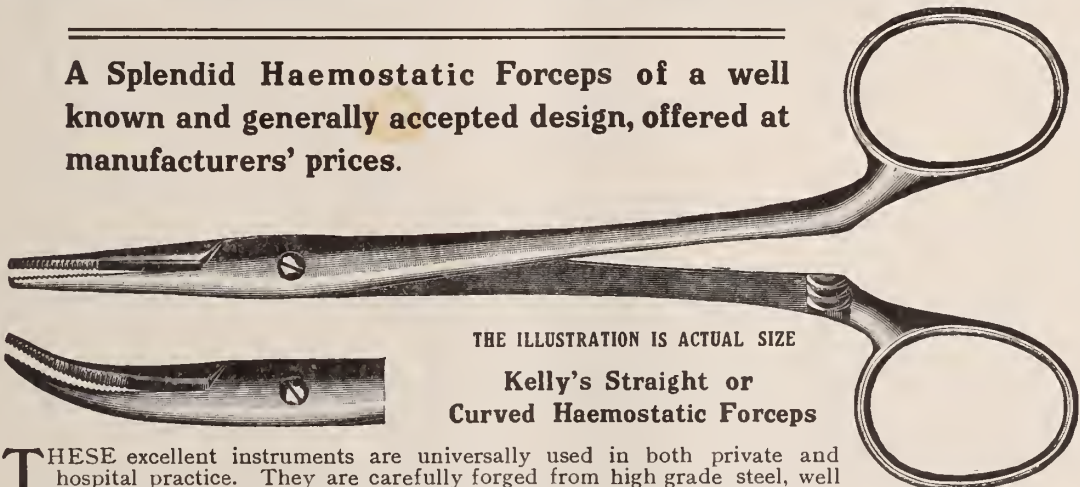
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L. M. WARFIELD, M. D., Editor
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VOLUME XVI
NUMBER 10.

MILWAUKEE, WIS., MARCH, 1918.

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ORIGINAL ARTICLES.

The Mental Hygiene Movement and Psychiatry, by W. N. Pecker, M. D., of Milwaukee.....	379
Surgical versus Medical Treatment of Goiter, by Ernest W. Smith, M. D., of Fond du Lac.....	388
Differential Diagnosis of Forms of Goiter, by J. F. Lumber, M. D., and T. W. Nuzum, M. D., of Janesville.....	392
Chronic Non-Surgical Pyelitis: Its Etiology and Treatment, by James C. Sargent, M. D., of Milwaukee... ..	400
Spontaneous Automatism, by Herbert W. Powers, M. D., of Milwaukee.....	404
Sketches of Wisconsin Medical History, by Major E. J. Barrett, M. O. R. C., of Sheboygan.....	406
NOTICES.....	407

EDITORIALS.

Pay Your Dues.....	408
Honor Roll.....	408
The Next State Meeting.....	408
Protecting the Army's Health.....	409
The Dam Breaks.....	409
Volunteer Medical Service Corps.....	410
Increased Rank and Authority for Medical Officers....	411

SOCIETY PROCEEDINGS.

List of Executive Officers of County Medical Societies.....	412
News Items and Personals.....	413
Correspondence.....	416
Patriot Physicians—List of Members.....	420
Book Reviews.....	421

Continued on Advertising Page X

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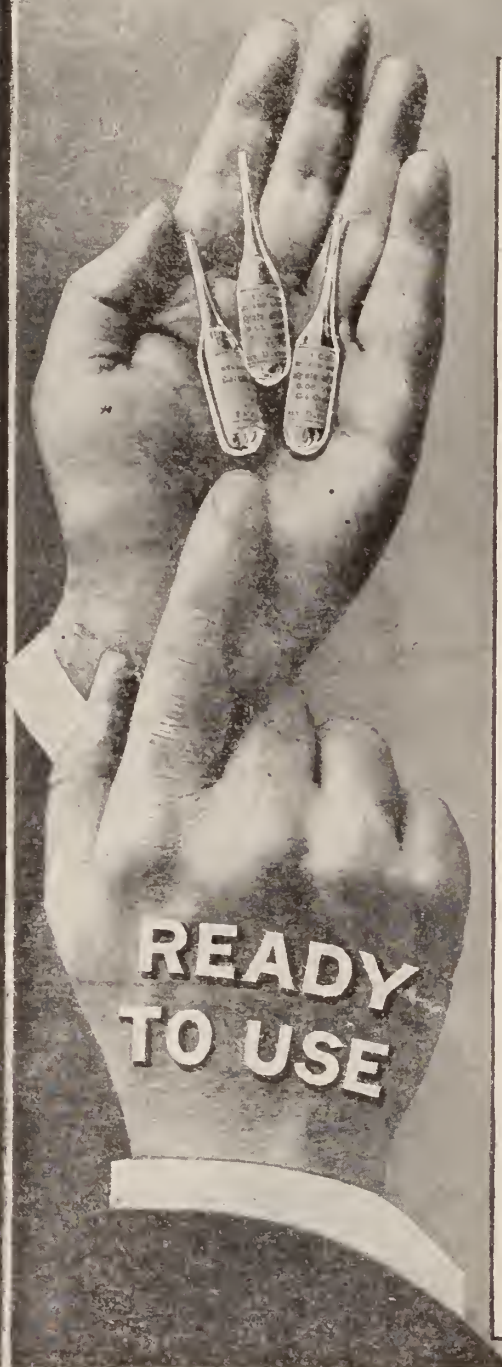


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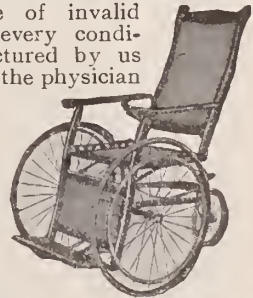


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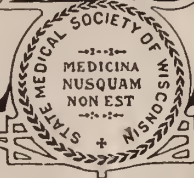
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L. M. WARFIELD, M. D., Editor

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VOLUME XVI
NUMBER 11.

MILWAUKEE, WIS., APRIL, 1918.

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ORIGINAL ARTICLES.

- The Wassermann Test in Relation to the Diagnosis and Treatment of Syphilis, by O. H. Foerster, M. D., of Milwaukee 423
- Recent Progress in the Diagnosis, Treatment and the Prevention of Deafness, by Franz Pfister, M. D., of Milwaukee 430
- The Eye in Industrial Accidents, by Major Nelson M. Black, M. O. R. C. of Milwaukee 435
- Report of Two Cases of Anthrax, by Edmund H. Mensing, M. D., of Milwaukee 442

EDITORIALS.

- The Poliomyelitis Situation 444
- Digitalis for Uncle Sam's Men 444
- American Salvarsan 445
- Medical Representation in the National Cabinet 445
- The Doctor and the Insurance Companies 445
- Association News—The Chicago Session 446

SOCIETY PROCEEDINGS.

- List of Executive Officers of County Medical Societies 448
- News Items and Personals 449
- Book Reviews 451

Continued on Advertising Page X

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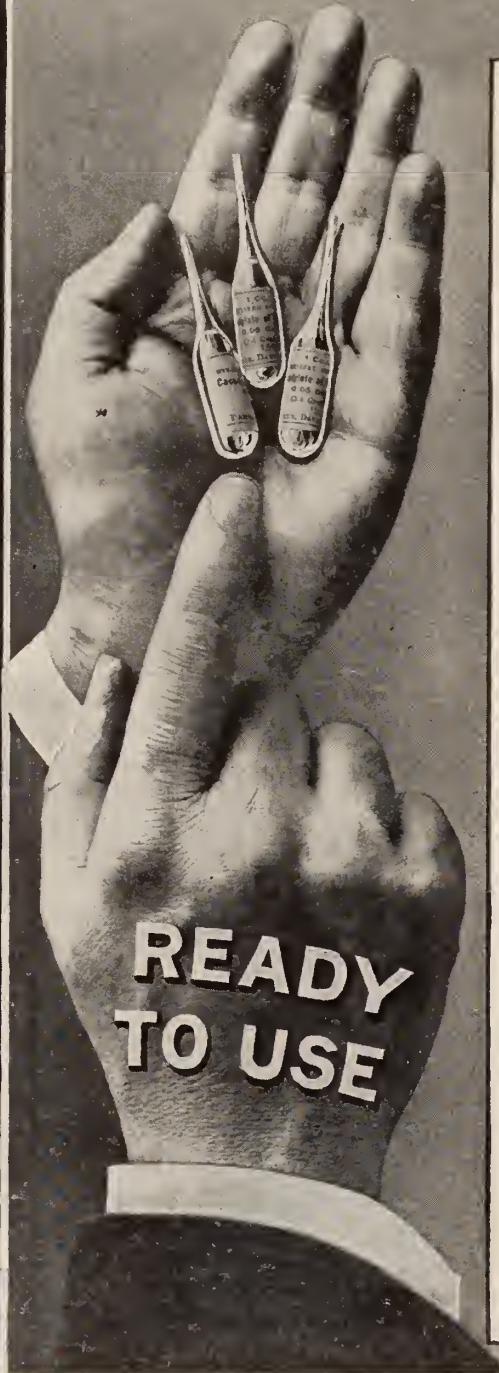


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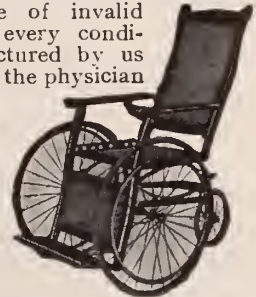
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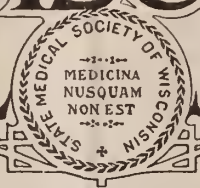
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Owned and Published by the State Medical Society of Wisconsin

L. M. WARFIELD, M. D., Editor
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VOLUME XVI.
NUMBER 12.

MILWAUKEE, WIS., MAY, 1918.

PER YEAR \$2.00
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Social Medicine in the Industries, by Charles H. Lemon, M. D., of Milwaukee..... 453
Health Insurance, by A. M. Gray, M. D., of Milwaukee. 459
The Present Status of Tonsil Removal, by Henry B. Hitz, M. D., of Milwaukee..... 463
A Plea for Conservation of Fingers, by Everett W. Maechtle, M. D., of West Allis..... 465

EDITORIALS.

Honor Roll 468
Pay Your Dues..... 468
Warfield to War Field..... 468
You Must Decide!..... 469
University Extension Post-Graduate Courses..... 469
A Costly By-Product of War..... 469
An Imperative Appeal for Medical Officers..... 470
Stand Behind the Boys..... 470

Course in Laboratory Work..... 470
Association News 471

SOCIETY PROCEEDINGS.

List of Executive Officers of County Medical Societies.. 472
News Items and Personals..... 473
Correspondence 474

MEDICAL MOBILIZATION AND THE WAR.

A Call to the Wisconsin Profession..... 475
A Call for Five Thousand More Medical Officers..... 476
Observations of a Wisconsin Medical Officer in France.. 476
The Explosives Regulation Law..... 477
A Letter from Captain Wilkinson..... 478
Medical Survey of State..... 478
War Notes 479
Recent Orders Issued to Wisconsin Physicians in Service 479
Ordered Into Service..... 480
Recommended for Commissions..... 480

Continued on Advertising Page X

[Entered as second class matter, June 30th, 1903, at the Post Office at Milwaukee, Wis., under Act of Congress March 3rd, 1879.]

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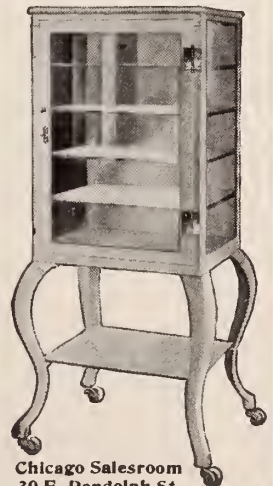
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