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The Wisconsin Medical Journal

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A Monthly Journal of Medicine and
Surgery

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VOLUME XXIV

JUNE, 1925—DECEMBER, 1925

	Page
A. M. A. Organizes Council on Physical Therapy	333
Anesthesia of the Abdomen, Local	245
Anesthesia, Recent Advances in	243
Annual Meeting, 79th	101-153-157-209-210-268-270-272-
Bach, Edwin C., Eye Clinics of Vienna, Observations in the	134
Bardeen, Charles R., Hospitals in Wisconsin; A Historical Survey	49-222-275
Basic Science Bill	45-103
Bast, T. H., Morphological Changes in Fatigue	371
Bickel, E. F., Letters from Abroad	274
Biologic Considerations, General	288
Bone Marrow-Spleen Extract on Relative Blood Cell Volume in Advanced Pulmonary Tuberculosis, Effect of	241
Books Received for Review:	
Aht's Pediatrics	110
Allergy, Asthma, Hay Fever, Urticaria and Allied Manifestations of Reaction	284
American Illustrated Medical Dictionary (Dorland)	226
Applied Biochemistry	442
Chemical Pathology	442
Clinical Features of Heart Disease	52
Collected Papers of the Mayo Clinic and the Mayo Foundation	112
Compend of Diseases of the Skin, A	168
Compend of Gynecology, A	52
Compend of Obstetrics, A	168
Cornell Clinic, The	110
Development of Our Knowledge of Tuberculosis	348
Diabetes and Its Treatment by Insulin and Diet	168
Diet in Health and Disease	52
Diseases of the Bronchi, Lungs and Pleura	168
Diseases of Children for Nurses	52
Eye, Ear, Nose and Throat Manual for Nurses	284
Eye Sight Conservation	442
Falth, the Falsity and the Failure of Christian Science, The	282
Feeding and the Nutritional Disorders in Infancy and Childhood	348
Gynecologic Urology	282
Health-Care of the Baby, The	52
History of the Massachusetts Medical Society, A	442
Infections of the Hand	110
International Clinics	168
Kidney Diseases and High Blood Pressure	348
Lectures, Clinics and Discussions on Electro-Physiotherapy	110
Manual of Gynecology, A	226
Manual of Physical Diagnosis, A	110
Medical Clinics of North America, Vol. VIII, No. V	52
Medical Clinics of North America, Vol. VIII, No. VI	110
Medical Clinics of North America, Vol. IX, No. I	168
Medical Clinics of North America, Vol. IX, No. II	348
Medical Clinics of North America, Vol. IX, No. III	442
Medical Follies, The	442
Medical and Surgical Report of the Roosevelt Hospital	52
Medical Treatment, The Art of	348
Methods and Problems of Medical Education	442
Methods in Surgery	282
Modern Surgery	112
Normal Diet, The	282
Ocular Therapeutics	284
Objective Psychopathology	348
Old and New Viewpoints in Psychology	282
Personal and Community Health	284
Personal Hygiene Applied	52
Physiological Chemistry	288
Physiologic Chemistry in Biology and Medicine	226
Physical Diagnosis of Diseases of the Chest	112
Physiotherapy	442
Practice of Gynecology, A	110
Preventive Medicine	226
Proceedings of the International Conference on Health Problems in Tropical America	110
Rejuvenation by Grafting	348
Some Fundamental Considerations in the Treatment of Empyema Thoracis	282
Submucous Endocapsular Tonsil Enuclation	442

	Page
Surgical Clinics of North America, Vol. V, No. II	112
Surgical Clinics of North America, Vol. V, No. III	168
Surgical Clinics of North America, Vol. V, No. IV	442
Text-Book of General Bacteriology, A	226
Text-Book of Medical Diagnosis, A	442
Text-Book of Physiology, A	442
Therapy of Puerperal Fever, The	442
Thoracic Surgery	442
Visceral Disease, Symptoms of	284
Writing of Medical Papers, The	442
Book Reviews:	
Bacteria in Relation to Man	348
Chemical Dynamics of Life Phenomena	112
Clinical Medicine for Nurses	172
Compend of Gynecology, A	228
Compend of Genito-Urinary Diseases and Syphilis, A	444
Cornell Clinic, The, 1921-1924	170
Diseases of Bronchi, Lungs and Pleura	444
Diseases of the Heart	56
Health-Care of the Baby, The	348
How Is Your Heart?.....July, XXII	56
Inheritance of Acquired Characteristics, The	114
Insanity and Law	114
Lectures, Clinics and Discussions on Electro-Physiotherapy	170
Lectures on Pathology	56
Manual of Diseases of the Nose, Throat, and Ear	112
Manual of Physical Diagnosis, A	170
Medical Clinics of North America, Vol. VIII, No. VI	170
Medical Education—A Comparative Study	112
New and Nonofficial Remedies, 1925	228
Pediatrics	114
Personal Hygiene Applied	172
Physical Chemistry in Biology and Medicine	444
Physiology of Mind, The	54
Proceedings of the International Conference on Health Problems in Tropical America	444
Practice of Pediatrics	228
Principles of Surgery for Nurses	444
Report on Second International Congress of Military Medicine and Pharmacy	56
Safeguarding Children's Nerves	54
Surgical Clinics of North America, Vol. V, No. II	170
Surgical Clinics of North America, Vol. V, No. III	446
Text-Book of General Bacteriology, A	348
Text-Book of Pathology	114
Text-Book of Practical Therapeutics, A	172
Brand, Mrs. Lonise F., Tuberculous, Occupational Therapy Has Important Role in Treatment of Wisconsin	47
Bridgman, L. W., Wisconsin Legislative Session of 1925, The	150
Bunting, C. H., Cell Reactions in Resistance and Immunity	305
Calcutt, A Case of Double Kidney with Cancer Results, How to Better Our	178
Cancer with Special Reference to Gastric Cancer, A More Hopeful View of	185
Carcinomata, Precancerous Lesions and Early; Fulguration Treatment	191
Carr, A. M., Health of the Child in School	369
Carter, Ralph M., Finger Infections, The Treatment of	312
Cataract Operation by Suction; The Barraquer Method	235
Cell Reactions in Resistance and Immunity	305
Chen, K. K., Ephedrine	321
Christopherson, H. H., Insane, Care of	311
Correspondence 44-146-207-208-267-331-332-333-428	408
Council Proceedings, 1925	408
Coffe, Geo. W., Hyperthyroidism and Gastric Ulcer, A Suggested Analogy Between	57
Crumhorne, S. J., Health Progress in Wisconsin Cities	360
Cunningham, Wilson, Medicine, Origin and Progress of	351
Deaths 44-100-146-147-207-266-330-427	36
Diphtheria, Diagnosis of	36
Dodson, John M., Health Magazine, Obtaining Maximum Results From a	344

	Page
Dooge, Karl W., Cancer, with Special Reference to Gastric Cancer, A More Hopeful View of	185
Ductless Glands on Biologic Reaction, The Influence of	303
Ear, Complications of Suppurative Inflammation of the Middle	125
Echols, Chester M., Tri-State Clinic Tour	102
Editorials 30-31-32-88-89-90-138-139-140-196-197-198-254-255-256-316-317-318-419	321
Ephedrine	321
Epidermophytosis	1
Esophageal Lesions, The Importance of the Early Diagnosis of	115
Evans, Cecelia A., R.N., Public Health Nursing and the Factors that Determine Its Value, Value of	91
Evans, Edward T., Letters from Abroad	27
Exhibits, Annual Meeting	215
Eye Clinics of Vienna, Observations in the	134
Fatigue, Morphological Changes in	371
Fiedler, Otto A., State Board of Health and Its Policies, The	335
Finger Infections, The Treatment of	312
Fistulae of the Bladder	63
Fitzgerald, Anne, Anesthesia, Recent Advances in	243
Fletcher, E. A., Ureteral Stricture	66
Foerster, H. R., Radiotherapy of Malignancies, The Present Status of	231
Gastric and Duodenal Ulcers	60
Greenwood, Arthur M., Epidermophytosis	1
Ground, William E., Cancer Results, How to Better Our	178
Grove, William E., Mastoid Operation, The Indications for the Radical	132
Gnifford, H. M., Typhoid Carrier, The	261
Guyer, M. F., Biologic Considerations, General	288
Hager, B. H., Urethra and Bladder, Foreign Bodies in—Report of a Case	320
Harris, M. L., Medical Profession, Some Problems of the	340
Headaches from the Systemic and Cranial Standpoint	248
Health Magazine, Obtaining Maximum Results From a	344
Health Progress in Wisconsin Cities	360
Hedding, B. E., Bone Marrow-Spleen Extract on Relative Blood Cell Volume in Advanced Pulmonary Tuberculosis, Effect of	241
Higgins, Samuel G., Cataract Operation by Suction; The Barraquer Method	235
Hipke, L. E., Anesthesia of the Abdomen, Local	245
Hospitals in Wisconsin; A Historical Survey	49-222-275
House of Delegates, 1925	156-214-373
Hyperthyroidism and Gastric Ulcer, A Suggested Analogy Between	57
Immunity, Biologic Basis of	300
Industrial Surgeon, The	25
Industrial Surgery—Its Aims and Accomplishments	21
Industrial Surgery, Psychology of	17
Insane, Care of the	311
Journal Book Shelf 52-110-168-226-282-346-442	323
Judd, E. Starr, Gastric and Duodenal Ulcers	60
Kassowitz, K. E., Immunity, Biologic Basis of	300
Kasten, H. E., Calcutt, A Case of Double Kidney with	90
Kay, Harry M., Myeloblastic Leukaemia, Acute; A Case Report	257
Kaysen, Ralph, Industrial Surgery—Its Aims and Accomplishments	21
Kearns, W. M., Ureteral Stricture	66
Kendall, Edward C., Ductless Glands on Biologic Reaction, The Influence of	303
Koehler, J. P., Smallpox Epidemic, How Milwaukee Aborted Its	323
Laws Affecting Physicians:	
Federal Income Tax Law	430
State Income Tax Law	432
Laws Governing Licensure	434
Federal Prohibition Law	436
State Prohibition Law	436
State Health Laws	439
State General Hospital	439
Federal Narcotic Law	440
State Narcotic Law	440
American Medical Association, Dec. XXIV	440

	Page		Page		Page
Letters from Abroad.....	27-85-102-136-274	Public Health Nursing and the Factors that Determine Its Value, Value of....	91	Trempealeau-Jackson-Buffalo	42-143-205
Liebler, W. A., Ureteral Stricture.....	66	Puestow, K. L., Osgood-Schlatter's Disease; a Report of Cases.....	32	Waiworth	42-205
Listening In.....	147-208-209-271-332-429	Pyelogram, The Value of the.....	74	Washington-Ozaukee	98-265-424
Malignant Lesions of the Buccal Cavity and of the Skin, Surgical Diathermy in the Treatment of.....	173	Radiological Technicians Established at Marquette University, Course for.....	164	Waukesha	143-265
Marriages and Engagements 100-146-207-266-427		Radiotherapy of Malignancies, The Present Status of.....	231	Waupaca	143
Marriage Prohibition, Governor Vetoes..	95	Richards, Cyril G., Fistulae of the Bladder	63	Winnebago	42-98
Mastoid Operation, The Indications for the Radical	132	Roach, Th. S., Bone Marrow-Spleen Extract on Relative Blood Cell Volume in Advanced Pulmonary Tuberculosis, Effect of	241	Miscellaneous Societies:	
McMahon, Francis B., Malignant Lesions of the Buccal Cavity and of the Skin, Surgical Diathermy in the Treatment of	173	Sargent, James C., Pyelogram, The Value of the	74	Central Wisconsin Ophthalmological and Oto-Laryngological.....	43-328
Medical Profession, Some Problems of the Medicine, Origin and Progress of.....	351	Schlomovitz, Benj. H., Bone Marrow-Spleen Extract on Relative Blood Cell Volume in Advanced Pulmonary Tuberculosis, Effect of.....	241	Green Bay Academy of Medicine.....	43-328-424
Membership List, 1925.....	411	School Children, Health of.....	369	Marquette Alumni Association.....	424
Middleton, William S., Typhoid Fever Complicated by Parenchymatous and Fatty Degeneration of the Liver—A Case Report	319	Scurvy, Report of Two Cases.....	259	Milwaukee Academy of Medicine.....	43-98-328-424
Miller, Ernest W., Industrial Surgeon, The	25	Smallpox Epidemic, How Milwaukee Aborted Its	323	Milwaukee Neuro-Psychiatric Society, 328	
Muehler, E. F., Skin and Their Importance in General Medicine, Functions of the	10	Smith, O. E., Calculi, A Case of Double Kidney with	90	Milwaukee Oto-Ophthalmic Society.....	43-424
Muisow, J. E., Suppurative Otitis Media, Conservative Treatment of Chronic.....	130	Smith, Richard C., Ear, Complications of Suppurative Inflammation of the Middle	125	Ninth Councilor District.....	42-205-267-327
Murphy, F. D., Scurvy, Report of Two Cases	259	Society Proceedings—County Societies:		Second Councilor District.....	205
Myeloblastic Leukaemia, Acute; A Case Report	257	Ashland-Bayfield-Iron	97-327	Tenth Councilor District.....	327
Neff, E. E., Tryparsamide on the Optic Tract, The Effect of.....	120	Barron-P-W-S-B	41-265-423	University of Wisconsin Medical Society	143
News Items and Personals.....	43-44-98-99-100-144-145-146-205-206-207-265-266-328-329-330-425	Brown-Kewaunee	41-97-265-327-423	Society Records.....	44-100-147-207-266-330-428
Nozum, Thomas W., Carcinomata, Precancerous Lesions and Early; Fulguration Treatment	191	Chippewa	143-423	Sonnenschein, Robert, Headaches from the Systemic and Cranial Standpoint..	248
Nye, Ray J., Volstead Act as Applicable to Physicians Explained, Essential Features of	148	Clark	143	State Board Examinations Announced, Results of June-July.....	218-220
Officers of State and County Medical Societies, List of Executive.....	40-96-142-204-264-326-422	Crawford	41-97	State Board of Health and Its Policies, The	335
Oh, Doctor, Doctor!.....		Dane	41-97-265-327-423	State Board of Health Report.....	201
July, XXII; Aug., XXIV; Sept., 230; Oct., 286; Nov., 350; Dec.....	446	Douglas	41-97	Stovall, W. D., Diptheria, Diagnosis of	36
Osgood-Schlatter's Disease; A Report of Cases	32	Eau Claire and Associated.....	41-97-265	Suppurative Otitis Media, Conservative Treatment of Chronic.....	130
Pemphigus of the Throat.....	199	Fond du Lac.....	423	Therapeutic Notes—	
Permits, New Law Enacted Relative to Physicians' and Druggists'.....	109	Grant	41-265-423	July, XXVIII; Aug., XXX; Nov., XXVI	
Powers, Herbert W., Industrial Surgery, Psychology of	17	Jefferson	41	Tryparsamide on the Optic Tract, The Effect of	120
Practitioner Starting His Career, Thoughts and Hopes of a Young.....	166	Kenosha	42-98-327	Tuberculous, Occupational Therapy Has Important Role in Treatment of Wisconsin	47
Presidential Address, 1925.....	351	LaFayette	265	Typhoid Carrier, The.....	261
Public Health Notes 39-94-263-350 Dec. XXXIV		Langlade	423	Typhoid Fever Complicated by Parenchymatous and Fatty Degeneration of the Liver—A Case Report.....	319
		Marathon	265-423	Urethra and Bladder, Foreign Bodies in—Report of a Case.....	320
		Marinette-Florence	98-205-265-327-423	Ureteral Stricture	66
		Milwaukee	42-265-327-423	Volstead Act as Applicable to Physicians Explained, Essential Features of.....	148
		Oconto	265	Warfield, L. M., Letters from Abroad..	27-85-136
		Onelda-Forest-Vilas	205	Waugh, Justin M., Esophageal Lesions, The Importance of the Early Diagnosis of	115
		Outagamie	42-327-424	White, Charles J., Epidermophytosis....	1
		Racine	42-327	Wisconsin Legislative Session of 1925, The	150
		Rock	42-327	Wisconsin Statutes Covering Field of "Treating the Sick," Codification of..	225
		Shawano	143		
		Sheboygan	98		

SFP 9-1925

A Merry Christmas



GOOD HEALTH

HAVE YOU BOUGHT YOUR
CHRISTMAS SEALS?

WISCONSIN ANTI-TUBERCULOSIS ASSOCIATION

The Wisconsin Medical Journal

Volume XXIV

MILWAUKEE, JUNE, 1925

Number 1

Epidermophytosis*

BY CHARLES J. WHITE, M.D.,

Professor of Dermatology in Harvard University, Chief of the Dermatological Service at the Massachusetts General Hospital, and

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Assistant in Dermatology at the Massachusetts General Hospital

I have chosen as the theme of my discourse the form of ringworm known sometimes as epidermophytosis. My object in this choice is principally to try to make known to the medical profession as a whole what dermatologists have learned during the last five years about an infectious disease which has grown in this interval from relative nothingness into one of our most prevalent affections.

Epidermophytosis is a multiform infection of the skin and nails due, evidently, to various types of the ringworm plant. Seemingly in the long run it spares no portion of the human integument save the hair.

AETIOLOGY

The exact provenance of this mould is very hard to determine. In the majority of instances we obtain absolutely no clue as to the source of infection and feel inclined to fall back upon the idea that the spores are derived straight from the air. This is not a shiftless thought for we know that leather shoes left in a suitable place and atmosphere may develop a mouldy growth upon their surface.

Watching this disease intensely during the last six or seven years and questioning its victims closely we feel decidedly inclined to incriminate the animal products leather and wool as the chief sources of infection. Among the separate items which have created suspicion I would mention bathing suits, jockey straps, handles of golf clubs, knitting wool, leather and woolen gloves, woolen socks, woolen tights, leather shoes worn without stockings, trusses, base balls and athletic underclothes which have been hung up, hot and wet after use, in a dark, confined space and subsequently worn once or many times before being

cleansed. In addition to these groups a wet sponge used in bowling seemed to be the infectious origin in one patient.

Two probable aetiological conclusions stand out pre-eminently: First, man does not give this disease to his neighbor directly; and second, the bulk of mankind, in New England at least, seems relatively immune to its attack, for in my private practice in only 4½ per cent of these infections was a second example found in the patient's family or immediate entourage. The only exception to this second conclusion occurred in a boarding school of 175 boys where six individuals who used the same shower-bath became infected about the feet. As a second known instance there is on record the infection of twenty-three members of a golf club whose feet became involved after using the club's shower-bath.

MYCOLOGY

The laboratory investigation of epidermomycoses consists of two parts: (a) The microscopic examination of the fresh material, scales and bits of the infected nails, and (b) cultivation and identification of the fungi.

It is important to select the most favorable material for microscopic examination. In the foot and hand cases the best material will be found at the advancing borders of the lesions. At the junction of the infected area with the normal skin there will be found a delicate scaling border with the free ends of the desquamating epidermis toward the center of the lesion. This edge should be raised with forceps and peeled off toward the normal skin and examined. The macerated material so often seen is useless in most cases.

In the vesicular type one should cut off the roofs of the vesicles and use them for examination. The roofs of dried vesicles are also frequently positive. The ordinary crusts in these cases are of no value.

*Read before the Inter-State Post Graduate Assembly, Milwaukee, Wis., Oct., 27-31, 1924.

Editor's Note—See addenda for summary of other works dealing with this subject.

In nail cases one should pare off thin slices from the nail after its surface has been scraped clean with the edge of a glass slide. If it is necessary to preserve the material for future examination it is best kept between two slides whose surfaces have been flamed. Such material may be kept almost indefinitely, both for examination and for cultural work.

For the microscopic examination of the fresh material use is made of the clearing effect of KOH on the tissue cells while the fungi are resistant, the result being that the fungi show as refractile bodies against a fairly clear background.

The usual directions are to mount the material in 40 per cent KOH on a slide, cover with a cover glass and gently heat, but we have found that much better results can be obtained by boiling the material in a test tube or watch glass in an excess of KOH. The boiling should be carried just to the point where the scales do not disintegrate. The liquid with the scales is then poured into a watch glass and the scales floated onto a cover glass as one would mount a paraffine section. In case the scales are disintegrated the liquid may be centrifuged and the sediment pipetted off and mounted. The fungi are so resistant that long threads or hyphae may be found in a case which contains a considerable amount of the fungus.

In searching for the fungus the high dry lens of the microscope should be used with most of the light cut off. Frequently the hyphae can be seen with the low power and if one is sufficiently expert in their recognition this is a great saving of time. The parasite should appear as a separate, refractile thread, sometimes branching and sometimes broken up into a chain of fragments. One should never make a positive diagnosis unless these fragments are seen in definite chains. These fragments are usually spoken of as spores but they are not true spores but are bits of the vegetative part of the parasite. Much patience is necessary in this part of the work and several hours of careful search are not too many before pronouncing a case positive or negative.

The fungi show two stages of growth—the simple vegetative and the form in which certain portions of the hyphae are differentiated for the purpose of reproduction. The primary reproductive body of the fungi is called a spore, and in the fungi it performs a function analogous to that of seeds in the higher plants. The vegetative forms

are practically all alike, certainly not sufficiently different to allow identification of the different genera and species in the scales, so that their manner of producing spores or fruiting bodies is the chief means at present known for such identification. In the host these fungi show only their vegetative form; on cultures they may show distinguishing features such as special spore production or other differentiating manners of growth, and it is for this reason that they must be grown in culture.

There is one other peculiarity which must be considered. On mediums containing sugars many of these fungi after varying lengths of time take on the so-called pleomorphic form, which is a return to the vegetative manner of growth. This consists of an overgrowth of hyphae which do not produce spores and which, when transplanted, always give the same pleomorphic growth, never the characteristics of the primary culture. On mediums which do not contain sugar this change does not occur, so that we grow all our cultures on two mediums, one containing sugar and one containing only agar and peptone to preserve the culture. The standard mediums are those of Sabouraud and are made up as follows:

(a) Glucose4.0%	(b) Maltose4.0%
Peptone1.0%	Peptone1.0%
Agar1.5%	Agar1.5%

and (c) the conservation medium.

Peptone3.0%
Agar1.5%

A crude French glucose and maltose can be obtained or American pure dextrose (DifCo) may be used. Peptone Chassaing, a French product, is the best peptone to use. Recently a new medium has been recommended by William Goldschmidt (*Brit. J. Dermat. & Syph.* 36:204 (May) 1924). This consists of:

Pure glucose	4.
Agar	2.
Fairchild's pure bacteriological peptone	1.
Lemco (ordinary)	0.5
Sodium chloride	0.5
Tap water to	100.

Standardized to pH 6.0

This medium aims to do away with the uncertainties of composition of the ingredients of the French medium and the author reports it to be

very successful in cultures of *Microsporon Audouini* which are grown with difficulty on the usual mediums. We have not yet given this a trial.

In sterilizing the medium care should be taken not to overheat as this changes the sugars. For the first plants of suspected material slants in tubes are used. For further study of the growths obtained plants are made on Erlenmeyer flasks which give more material and space for the fungi to show their manner of growth.

In making the first plants the dried scales are cut up into small pieces and placed on the agar, about four pieces to a tube. At least twenty plants should be made in each case, but often many more are necessary before getting a growth. The great difficulty is from contaminations from bacteria and saprophytic moulds. Various methods are used to inhibit these, such as washing the scales in alcohol and adding gentian violet (1:500,000) to the medium.

The cultures are grown at room temperature and after a growth is obtained it is transferred to the three different mediums for study. It is also grown in hanging drop preparations of glucose bouillon and direct mounts made in glycerine. The authoritative work on this subject is by Sabouraud (Les Teignes, Paris, 1910) but considerable work is being done and our knowledge is changing rapidly.

STATISTICS

(Based since 1910 upon the experience of one of us (C. J. W.) in private practice.)

SEX

Males	521
Females	315

AGE OF INCIDENCE

18 months.....	1 case
1st decade.....	9 cases
2d decade.....	96 cases
3d decade.....	216 cases
4th decade.....	187 cases
5th decade.....	130 cases
6th decade.....	108 cases
7th decade.....	34 cases
8th decade.....	5 cases
9th decade.....	1 case

OCCUPATIONS

Housework or none.....	172 individuals
Students	137 individuals
Clerical work.....	135 individuals
Physicians or nurses.....	62 individuals
Salesmen or women.....	32 individuals
Teachers	24 individuals
Handlers of leather.....	21 individuals
Lawyers	17 individuals
Household servants.....	16 individuals
Handlers of wool.....	15 individuals
Clergymen	13 individuals
Bank tellers.....	3 individuals
39 other occupations.....	1 or more

DURATION OF DISEASE

2 days 5 cases	1 year....75 cases	12 years.... 7 cases
1 week ....12 cases	2 years....56 cases	13 years.... 1 case
2 weeks ...41 cases	3 years....42 cases	14 years.... 1 case
3 weeks ...15 cases	4 years....26 cases	15 years.... 6 cases
1 month...40 cases	5 years....17 cases	16 years.... 2 cases
2 months..41 cases	6 years....12 cases	17 years.... 1 case
3 months..33 cases	7 years....17 cases	18 years.... 1 case
4 months..22 cases	8 years....12 cases	20 years.... 1 case
5 months..25 cases	9 years.... 8 cases	25 years.... 1 case
6 months..26 cases	10 years....11 cases	30 years.... 1 case
7 months.. 5 cases	11 years.... 7 cases	
8 months.. 6 cases		
9 months.. 6 cases		
10 months.. 3 cases		

POSITION OF LESIONS

Palms	182	Both groins.....	223
Back of hands.....	57	Perineum	48
Fingers	225	Intergluteal folds.....	47
Arms	8	Penis	17
Bend of elbows.....	25	Scrotum	48
Flexor of forearms....	20	Labia	16
Nails	21	Pubes	23
Scalp	1	Legs	11
Neck	10	Popliteal spaces.....	9
Axillae	96	Ankles	14
Under breasts.....	9	Soles	118
Umbilicus	7	Back of feet.....	42
Trunk	0	Instep	46
Left groin.....	39	Ball of feet.....	33
Right groin.....	15	Toes	272

TYPES OF LESIONS

Vesicular	307	Papular	44
Scaling	282	Callous	42
Macular	270	Keratotic	33
Macerated	128	Lichenified	21
Fissured	77	Purpuric	1
Epidermophytide.....		31	

APPARENT INCREASE IN PREVALENCE OF THE DISEASE

1910.....	3 cases	1918.....	31 cases
1911.....	5 cases	1919.....	79 cases
1912.....	11 cases	1920.....	87 cases
1913.....	14 cases	1921.....	131 cases
1914.....	20 cases	1922.....	118 cases
1915.....	17 cases	1923.....	148 cases
1916.....	21 cases	1924 (up to Oct.	
1917.....	25 cases	10)	126 cases

MORPHOLOGY

As noted in one of the preceding statistical groups we have encountered the eleven following clinical types of the disease, namely, vesicular, scaling, muscular, macerated, fissured, papular, callous, keratotic, lichenified, purpuric and epidermophytide. We may find pure types representing any of these several forms but more often a single patient will present one or more varieties of this multiform disease.

THE VESICULAR FORM (24.8%)

This type is the commonest and is found practically limited to the hands and feet. The vesicles may be minute and superficial or larger and deeper. The vesicles may arise in a few hours and in uncountable numbers or they may develop from day to day and always remain scattered and sparse.

The vesicles are always round and dome-shaped. When superficial one cannot differentiate them from the vesicles of dermatitis venenata and one must rely in the differential diagnosis upon the history of the case and upon the evolution of the lesions. When deep the vesicles often present a feature which one might well regard as pathognomonic. This characteristic consists of a peculiar steel-blue center surrounded by a lighter-tinted periphery. Formerly we observed this feature in the vesicles of dyshidrosis but today most of us consider dyshidrosis as the vesicular form of epidermophytosis. The superficial vesicles are somewhat easily broken, the deeper variety is very tough and one must plunge the knife firmly to open them.

Both varieties of lesions may disappear spontaneously. If friction or maceration break the envelope of the superficial type the surface of the affected skin becomes wet and easily confused with the appearances of eczema madidans. During the possible spontaneous absorption of the contents of the deeper variety a noteworthy ring of desquamation may form about the periphery of the lesion. This phenomenon should always awake our suspicions that we are probably confronted with the disease epidermophytosis.

Vesicles of epidermophytosis usually form on the sides of the fingers and the toes, less often on the lower surfaces and least often on the dorsal aspects. They are very often seen on the palms, when they are always deep, while on the plantar surface they usually affect the arch of the foot, less frequently the actual sole.

Itching may be slight and negligible, more often severe, and at times unbearable.

There are great variations in the course of this type of the disease: usually periodicity marks its progress. All forms of epidermophytosis are apt to be more severe in warm weather—plants as a rule flourish with heat and moisture, but the vesicular type above all waxes in the summer months. The vesicular type is perhaps one of the least obstinate and most easily curable of all forms of the infection.

THE SCALING FORM (22.8%)

Perhaps we can regard the scaling variety of epidermophytosis as a stepping stone to the hyperkeratotic and to the callous varieties but it has certain points which justify in my opinion a separate consideration.

The real seat of this type of the disease lies on or about the toes. This statement, of course, does not preclude the fact that a certain degree of scaling may at times accompany every form and every site of the infection. To observe the scaling process at its best however we must separate the toes one from another, and especially the fourth and fifth, and note the condition therein. In addition, we must turn the feet over and observe carefully the junction of the toe with the plantar surface.

This desquamative process seems to follow no precedent change so far as one can see—it is a primary one. The scales may be small or larger, they are usually adherent at one part, they vary from the dry, whitish type to the moister, greasy, darker-hued variety. When torn away they do not leave a bleeding surface. The scales where the toes join the sole are always small and usually whitish and relatively adherent. At times the scales are on the sides of the toes, at others in the web between, and again at both sites.

The degree of severity of this form of the disease varies greatly. At times it takes a careful observer to note that the condition exists, and this is especially true at the plantar seat. Very often the condition exists merely between the fourth and fifth toes. Again the merest tyro can see that every toe and every web is covered with many large scales. Pruritus is not particularly a salient feature.

The course of this scaling variety is always chronic but it cannot be regarded as one of the most obstinate forms of the malady.

THE MACULAR FORM (21.8%)

This is the original type of the disease, discovered by Hebra as far back as 1869, labelled by him eczema marginatum, and within a few months proved to be mycotic by Körbner, Pick and Kaposi. Since then men have added the synonyms red flap, jockey strap itch, etc.

To study this form at its best one should examine the thighs at their uppermost contiguous portions. From a previous personal statistical survey this type was found to be four times as prevalent in men as in women. It is found in the great majority of instances on both thighs, but when unilateral it favors the left side in the proportion of more than 2½ to 1.

We seldom see the disease in its infancy. When we are thus fortunate we find that it begins as one

or more minute macules of a delicate pink-red color and covered at times in the colder months with a delicate, hardly appreciable, furfuraceous scaling. If present these scales give a suggestion of delicate buffness to the lesion. The plant is hungry and the process spreads. The single lesion grows and the several infections join so that in the course of a few weeks the outermost limits of the scrotum have been reached. The area of infection is not often visible unless the legs are separated. It is evident that this plant likes warmth, moisture and relatively darkness. The infected area at this stage is solid, its borders are sharply defined. If it arose from a single focus the periphery is a continuous gentle curve; if from two or more points the outline is mildly serpiginous. The process in these mild, restricted forms is not often itchy and is the most easily curable of all varieties of epidermophytosis. This form, unlike our old-fashioned *tinea circinata*, seldom clears up in the center.

There is another side to this picture. Where the soil is favorable or the plant vicious we see an extension of the disease. The thigh, even as far as the knee, may become the seat of the infection, the pubes may be invaded, the penis or labia may be attacked, the scrotum may become involved and the perineum and the intergluteal fold to its uppermost part may be infected. Curiously enough the actual groin seems always to escape!

Each of these separate sites, save the middle and lower thighs, for anatomical reasons presents variations in morphology and requires a separate description.

The pubic region is noteworthy only in the fact that the growth extends around the hairs but never invades them. How different from other forms of ringworm! The areas on the penis may be more elevated and assume a darker redness. Where the penis lies on the scrotum there may be maceration and rawness, perhaps due to a secondary infection. In circumcised individuals the glans penis and sulcus coronarius may present strikingly sharply bounded, mahogany-red areas. The labia majora, and at times the minora, grow darker in color and become thickened. The greater lips become dry and may develop a relative elephantiasis. The itching is practically always severe and often insupportable. The plant on the scrotum may produce a superficial redness and moisture and rawness; or a dryness and marked

thickening of the skin; or again peculiar, pea-sized, red, raw-looking, dome-shaped, isolated papules. The disease on the perineum presents no marked characteristics save those of mildness. The diagnosis, if the perineum alone were infected, would be an extremely difficult one. The peri-anal and intergluteal regions, on the other hand, produce symptoms in no way comparable with those of this group as a whole. Scaling is obviously absent; the redness is of a deeper hue and more angry; the anus itself seems fortunately to escape. The process, as a rule, soon leads to maceration, but we shall consider this feature under a separate heading. Itching here is usually present and of the severe type and we must differentiate this process from pruritus ani of other origins.

The macular form of epidermophytosis can and does exist on many parts of the body besides the genital and peri-anal regions, in fact we can encounter it over the whole body surface from the top of the scalp to the dorsum of the feet.

The disease on the scalp is of the utmost rarity, in fact so far only three cases have been recorded in the literature, one by one of us (C. J. W.). Quoting from a former personal description "the follicles for the most part appeared as patulous mouths, like the openings of a fine pepper box. Between many of these orifices and covering and obliterating others was a curious, brick-red, rather glistening and seemingly fibrous, curiously tortuous, elevated tissue with no suggestion of scales. Here and there, apart from this extraordinary development, was noted a papery exfoliation somewhat like that of a partially extinguished favus."

The macular form in the axillae is quite similar to that seen on the thighs and pubes. It is usually confined within the axillary folds but many extend well onto the chest wall in front or below.

The macular form below the breasts, especially if they are large and pendulous, often produces peculiar, scattered, pea-sized, papules with subsequent pustulation or maceration and rapid erosion of these secondary lesions.

The macular form on the back of the hands and feet spreads in a red, fan-shaped manner directly from the web of the implicated fingers and toes.

The macular form in the bend of the elbows presents a rounded area of distinctly fawn-colored, delicately scaling tissue extending usually equally

above and below the flexure of the joint so that when the arm is sharply flexed the two areas coapt strikingly.

The macular form in and about the umbilicus is apt to assume a dull-red-mahogany color and to become moist, the probable effects of secondary infection.

The macular form on the large flat surfaces of the body presents no variations from the lesions of the upper inner thighs which we have described as the type form.

THE MACERATED FORM (10.3%)

The seats of predilection of this type of epidermophytosis are between the toes, between the buttocks, between penis and scrotum and under overhanging breasts. The clinical aspects in the latter two areas have been previously described.

Between the toes, most markedly in the fourth interspace, we find a white, clean, parboiled, usually smooth, sometimes wrinkled condition, often of some depth. In extreme cases we have more than once noted a peculiar, ovoid structure seated at the bottom of the fourth interspace. This is seemingly an unattached, non-inflammatory cast. It can be easily raised and removed.

Between the buttocks beginning just anterior to the anus and in extreme instances running just beyond and above the opening of the intergluteal valley we find again the same white, clean, parboiled condition but this time this peculiar tissue may be bordered by a narrow, red, rather angry zone. As a further local peculiarity we have observed a longitudinal series of seemingly permanent pinhead-sized, dot-like depressions in the white portion of the macerated tissue.

Itching in macerated epidermophytosis may or may not be a serious subjective symptom. From a therapeutic point of view this type of the disease between the buttocks usually proves a most frightful stumbling-block; between the toes it usually proves decidedly recalcitrant; under the breasts and between penis and scrotum it is generally more amenable.

THE FISSURED FORM (6.2%)

This variety is not common. It is practically limited to the hands and feet and especially in those types which have been excited and overstimulated by treatment or by too much soap and water. Fissures in this disease, therefore, usually seem to be the product of overstimulation. As would be expected they are apt to form in the drier

types of the disease and thus we encounter them most frequently in the scaling and in the hyperkeratotic varieties of the infection. Their depth varies directly with the thickness of the earlier primary stage of the process, and thus we find them most highly developed in the calloused heel. On the fingers and toes their usual seat is at the respective junctions of the third phalanges and the metacarpals and metatarsals, practically always lying in a transverse direction. On the heels they usually assume a horizontal or oblique direction. When seen on the palms they run in any direction. At this especial site one sees one of the rarest of all types (save the scalp) of epidermophytosis. I refer to what I have previously nicknamed "the railroad map" form of the disease. Take for instance a railroad folder showing the many roads focussing at Chicago, or again the map of Pennsylvania, and note the network of lines. So in this type of epidermophytic palm one sees multitudinous, delicate, superficial, criss-cross lines, sometimes cuticolored, sometimes black, running over the palms.

THE PAPULAR FORM (3.5%)

Papular epidermophytosis is not common and there is not much to be said about it. Perhaps the scrotum is the seat of predilection and here we see rather large papules which tend to be isolated and to be a full red and to be moist. Elsewhere papules are smaller, and less red and less moist.

THE CALLOUS FORM (3.4%)

The callous type is seemingly more prevalent than my statistics indicate. The favorite site is unquestionably the feet and the calluses develop in one of two places over the transverse arch and on the heel. In the former situation the callus lies transversely, it may be curiously translucent and it is apt to be of an orange tint. The surface is always smooth, the outlines always sharp. It varies in size, but it tends to fill up this entire space. On the heel the callus usually takes the form of a horseshoe surrounding and covering the periphery rather than the entire surface. Here the new growth is more apt to be uneven on the surface and to be opaque and the color to be a dirty white, but more than one example has exhibited a curiously canary-yellow hue. The depth of this callus varies greatly. This latter type is one of the most difficulty to cure. If we succeed in macerating it sufficiently the underlying skin is of a pure pink shade.

THE KERATOTIC FORM (2.6%)

We find this type of the disease more frequently upon the palms and soles than elsewhere. It is apt to present round, symmetrical, small-pea-sized lesions sometimes projecting above the surface, sometimes imbedded in the horny layer with often a well-marked, surrounding, sunken rim. It seems very often to succeed a previous vesicle. The process does not seem to simulate the arsenical keratotic palm.

Warts, if they may be included at this juncture, occur rather more frequently than normal on the epidermophytic sole but apparently present no abnormalities. It is obvious that this pathologic surface offers easy ingress to superinfection.

THE LICHENOID FORM (1.7%)

Lichenification may occur on epidermophytic surfaces as on any other chronically pruritic skin. The favorite seat is on the upper-middle inner thighs and here we find the typically brown or chocolate colored, sharply bounded, slightly elevated areas of varying size and with surfaces covered with delicate interlacing whitish lines. Itching, the source and origin of this secondary cutaneous phenomenon, is usually severe and if scratching is not prevented the infiltration and elevation of these circumscribed plaques continue to increase.

Fortunately, in this form of epidermophytosis, we have several methods of rather successful therapeutic attack.

THE PURPURIC FORM (0.08%)

This type is so rare and so closely follows the well-known objective characteristics of purpura that further description seems unnecessary.

NAIL INFECTIONS

One hesitates to lay stress upon the clinical characteristics of any nail affection for the anatomical structure of the nail plate is so simple that many pathological processes present the same clinical features.

This dictum holds true in epidermophytosis. Nothing specific can be claimed for this disease. When infected the plate loses its translucency, becomes yellow and opaque, its surface becomes rough and friable and in certain instances becomes hyperplastic. At times the nail bed becomes involved and may thicken inordinately. One nail or all may share in the process. The cure is always difficult and usually extends over months.

EPIDERMOPHYTIDES (2.5%)

The word epidermophytide signifies a lesion accompanying epidermophytosis in some other part of the patient's body. Such a lesion is not produced directly by the plant itself but is probably induced by toxins derived from the actual epidermophyton growing on some other area of the infected individual's skin. We have analogous processes in tuberculosis and in the older, more familiar types of ringworm.

Unlike tuberculides, which are very multiform, epidermophytides, as we thus far recognize them, appear only as macules, sometimes small and numerous, but more often as large or larger sheets of well-defined, pink, delicately scaling erythema. Search for the epidermophyton always proves futile. The lateral chest wall, the abdomen, the thighs and legs are the usual habitats of this interesting type of the disease.

The treatment, of course, lies in the eradication of the causative and more or less distant infection.

As a final clinical observation let me state that hyperhidrosis seems to be a relatively frequent concomitant of epidermophytosis, in all probability a precursor of this infection, for we recognize that moulds flourish on a damp surface.

Such is the long and complicated story of the clinical appearances of this polymorphous infection. It is surely an interesting disease, the late recognition of which has decidedly lowered the incidence of certain inflammatory types which we formerly called eczema, eczema marginatum, dyhidrosis and certain examples of dermatitis infectiosa eczematoides. This disease must be rapidly becoming epidemic as witness its recognized and steady increase in one man's private practice from three cases in 1910 to 148 examples in 1923. Naturally, a certain percentage of this extraordinary increase is due to a growing knowledge and recognition of the disease but this argument would prove convincing to a decreasing degree with the passage of years of experience. Under such circumstances it becomes necessary for us guardians of the health of our communities to familiarize ourselves with the disease in all its aspects and to combat its increasing inroads.

TREATMENT

Our last chapter is rather a depressing one. The cure of this disease, as is so often the case in medicine, lags far behind our clinical and mycological knowledge. Some few cases show a sur-

prising inclination to disappear rapidly but the bulk of these infections yield painfully slowly to our best therapeutic efforts.

Our first endeavors should be directed toward confining the invasion of the parasite to its present sites and toward preventing its spread to other members of the patient's family. All infected areas should be covered and kept covered by sterilizable garments, the hands within loose cotton gloves, the feet within cotton socks, the body within cotton underclothes. These should be worn day and night and replaced by similar boiled clothes every twenty-four hours. Silk and wool and leather should never be allowed to touch the infected skin. Patients should never stand upon a shower-bath floor without socks upon their feet. Sponges, cakes of soap and linen towels should be replaced by sterilized gauze, liquid soap and paper towels. Running water should be used when possible rather than water confined within a basin or a tub.

Secondly, we should bear in mind that water is very apt to be irritating to a skin infected with epidermophytosis.

Insistence on these facts is prerequisite to a cure. With these preliminary warnings thoroughly inculcated into our patients' minds what local treatment shall we prescribe? Let us realize fully that at present we have no specific internal or external drug. What then can we do?

When confronted with vesicles we should open them aseptically as fast as they develop and then employ an aqueous solution of permanganate of potash 1:100, or an aqueous solution of sulphate of copper 1:250; or a saturated watery solution of picric acid or, according to Dr. Graves of St. Louis, dust the freshly drained vesicle with aristol and apply with a glass rod the following: ether 2; balsam of Peru 4; flexible collodion 32. In addition to any of these methods we have found extremely serviceable a hot sandy beach on which the patient should walk barefooted for an hour or more a day taking pains to crunch the feet deep into the sand at every step. Hands, of course, can be repeatedly and vigorously pushed into the hot sand but care should be taken to move to fresh areas on the beach every few moments.

Scaling, macular and fissured forms are benefited more or less by one or more of the following ointments: Ung. Whitfield No. 1; Acid. salicyl. 4, Acid. benzoic. 8, Adipis benzoat. 32; or Ung.

Whitfield No. 2: Acid. salicyl. 1, Acid. benzoic. 1.6, Paraffin. moll. 8, 01. cocois nucifer. 24 (this ointment must be kept cool or the oil separates badly); or Acid. salicyl. 2, Sulph. praecip. 2, Adipis benzoat. 32; or, according to French writers, an ointment of chrysarobin; but this drug is not successful in New England victims of the disease.

In macerated epidermophytosis we may try the methods advocated for the vesicular forms of the disease; or we may apply an ointment of crude tar, viz., crude coal tar. 2, zinc. oxid. 2, vaselin. 32; or an ointment devised by Dr. E. Wood Ruggles of Rochester, New York: phenol. 0.65, zinc. oxid. 6, ung. picis liquid. 10, ung. aq. rosae 20.

Calluses, keratoses and infected nails should be macerated in potash, neutralized with fats and then scraped with a dull knife day after day or we may adopt the method recommended by Dr. A. L. Slaze of Birmingham, Alabama, which consists in a radical peeling of the skin with the following paste: R acid salicyl 2 oz., starch powder 1 oz., petrolatum 3 oz; S. Apply for 30-50 hours and keep the patient at home.

Lichenifications and hyperidrosis can be decidedly benefitted by X-rays.

Despite any or all of these various therapeutic attacks the average infection of epidermophytosis will defy us for months. Time, patience and fidelity, however, will sooner or later triumph and except in the most desperate case the patient's long weary efforts will be crowned with success.

BIBLIOGRAPHICAL SUMMARY

In 1869, Hebra, to whom we all owe so much, described *eczema marginatum*. Soon after Hebra's first clinical description, K6rbner, Pick and Kaposi demonstrated the "mycosic" nature of the disease. In 1870, Tilbury Fox proved that certain so-called *eczemas of the palms* were in truth of ringworm origin, and in 1888 Pellizari described the same disease on the lateral aspects of the fingers. In 1891, Arnozan and Dubreuilh and also Mansonroff demonstrated examples of these conditions before their local medical societies.

In 1892, Djelaledin Mouktar wrote the most detailed and comprehensive paper on the subject which had thus far appeared, but limited himself to the disease on the palms and soles and fingers and toes. It was he who first noted that *dyshidrosis* and ringworm were indistinguishable clinically.

In 1905, Castellani proved that "dhubie itch" was in reality due to an unusual variety of ringworm fungus and gave the name of *Trichophyton cruris* to an organism which he isolated from some of his cases; at this time he recorded cases of this disease on the scrotum, in the axilla, and on the chest and abdomen, and even went so far as to say that the disease could exist anywhere except on the scalp. Two years later, that is, in 1907, Sabouraud showed that this fungus was not a trichophyton but belonged to another genus and he gave it the name *Epidermophyton inguinale*.

In 1902, Whitfield published his first observations. Later,

in 1910, he discussed maceration between the toes, and three years later was sufficiently informed to classify the disease into three types: (1) the acute vesicobullous; (2) the chronic intertriginous of the toes, and (3) the hyperkeratotic of the palms and soles. In 1910 he gave us "Whitfield's ointment."

In 1920, Bang added further confirmation from Copenhagen of the rapidly increasing appreciation of epidermophyton infections. In 1913, Nicolau revived the study of the so-called eczema marginatum of Hebra, decidedly increasing our knowledge of the disease. In 1914, Kaufmann-Wolff published a paper based on twenty-five cases observed in Vienna, Paris and Berlin, and described for the first time the lardaceous type of infection between the toes. In the same year, 1914, we find the communication on this subject from an American source, Montgomery and Culver; followed, in 1915, by one from Hartzell. In 1916, Ormsby and Mitchell published their striking paper corroborating the earlier claims of Monkstar that dyshidrosis is purely and simply an epidermophyton infection. In the same year another American, Dr. C. Guy Lane, published a paper. Another communication on this subject, a paper based on the observations of 165 private cases, was read by one of us (C. J. W.) in 1919.

Considerable work has been done in the last three years on the generalized eruptions accompanying deep fungous infections. The chief is that of Bloch (Les trichophytides, *Ann. de dermat. et syph.* 2:1 (Jan.) 1921).

E. Bruusgaard (Brit. J. Dermatol. 34:130 (May) 1922) reported a case of blood borne infection with a trichophyton of the gypsum group, and Williams also reported cases of trichophytides accompanying kerion. (*Arch. Dermat. & Syph.* 4:353 (Sept.) 1921).

No cases are found in the literature of a similar eruption with epidermophyton infections and since all the trichophytic eruptions accompany deep infections it may be that they will not be found in such a comparatively superficial condition as that of epidermophytosis. On the other hand, the frequent failures to find the fungus in the generalized epidermophytoses would be well explained by the postulate of an epidermophytide. It is also certain that the epidermophyton is not responsible for all the infections now classed under the head of epidermophytosis. Cultural experiments by Mitchell (Further Studies on Ringworm of the Hands and Feet, *Arch. Dermat. & Syph.* 5:174 (Feb.) 1922) and Greenwood (Report on Cultures of Parasitic Fungi, *Arch. Dermat. & Syph.* 8:81 (July) 1923) show a comparatively large proportion of the cases of epidermophytosis to be due to the trichophytons.

The most recent report on immunity in ringworm infections (Greenbaum: Immunity in Ringworm Infections, *Arch. Dermat. & Syph.* 10:279 (Sept.) 1924) concludes that superficial ringworm infections give only a local tissue immunity; that deep infections (in guinea pigs) result in a partial general immunity; and that few or no ringworm antibodies develop in the course of superficial ringworm.

R. De Silva (*J. Trop. Med.* 24:303 (Dec. 21) 1923) produced typical Dhobie itch on a man by inoculation with a culture of epidermophyton rubrum (Castellani). According to Ota (Contribution to Study of Trichophyton Purpureum Bang, Trichophyton Interdigitale Priestly and Trichophyton "B" Hodges, also on Trichophyton "A" and Trichophyton "B" of the Author, *Arch. Dermat. & Syph.* 5:693 (June) 1922) this organism belongs among the group of trichophytons.

J. Butler (*Northwest Med.* 21:366 (Oct.) 1922) reported a case of epidermophytosis on the bald scalp—a very unusual location.

N. Hallows (*Lancet* 2:791 (Oct.) 1922) presented an excellent article on the control of tinea cruris.

Interesting original work has been done by J. G. Hopkins, M.D., and K. Iwamoto, M.D., on Fermentation Reactions of the Ringworm Fungi (*Arch. Dermat. & Syph.* 8:619 (Nov.) 1923; *Ibid.* 8:838 (Dec.) 1923).

W. Dubreuilh (*Ann. de dermat. et syph.*, page 65 (Feb.) 1924) has described an intertrigo from which was constantly recovered a parasite of yeast-like growth not resembling the trichophytons.

Sabouraud criticizes (*Ann. de dermat. et syph.* 4:425 (July) 1923) Petges' Report on Epidermomycoses (Premier Congres des Dermatologistes et Syphiligraphes de langue française, Masson et Cie, Paris, 1922). He states that there are only trichophytic and streptococci intertrigos, and that great care should be taken to be certain that the common and known infecting agents are absent and that the supposed causal agents (chiefly yeasts) are not merely surface contaminations.

M. Zingali (*Gior. ital. d. mal. ven.* 64:929 (Aug.) 1923) distinguishes two types of epidermomycosis of the hands and feet: (1) Dyshidrotic or eczematous, vesicular and pustular; (2) intertriginous, usually seen between the fingers and toes.

Petges gives a comprehensive Report on Epidermomycoses (Premier Congres des Dermatologistes et Syphiligraphes de langue française, Masson et Cie, Paris, 1922.)

Dyshidrosis has had much discussion during the past few years. Darier (*Lancet* (Sept. 27) 1919) demonstrated that 80 per cent of the cases giving the clinical picture of dyshidrosis were of mycotic origin, and this led him to deny the autonomy of dyshidrosis. He considered it most often mycotic—at times artificial. The parasite was most commonly the epidermophyton, but might be a trichophyton or one of the group of yeasts—saccharomyces cryptococcus (Greenbaum and Klauder).

Sabouraud and Brocq hold that a true dyshidrosis, not mycotic, exists (Sabouraud: *Bull. Soc. Franc. de dermat. et syph.* No. 3, 1922).

A. Sicoli (True and Pseudo Dyshidrosis, *Ann. de dermat. et syph.* (Feb.) 1924), after very thorough work in Sabouraud's laboratory, concludes that the disease dyshidrosis is not a true entity but a syndrome which may be caused (1) by a mycotic infection; (2) by irritants; and that there is a third condition which is probably the dyshidrosis of Tilbury Fox. He distinguishes distinctive histological changes in these varieties.

E. Rajka (*Arch. f. Dermat. u. Syph.* 143:204, 1923) concludes that the syndrome called dyshidrosis comes from three causes: (1) Mycotic (trichophyton gypsum and epidermophyton); (2) pyogenic microbes; (3) other causes not parasitic.

Other articles on the general subject which have appeared are:

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Williams, C. M.: The Diagnosis of Some Eruptions on the Hands and Feet, *Arch. Dermat. & Syph.* 5:161 (Feb.) 1922.

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DIABETIC COMA COMPLICATED BY ACUTE RETENTION OF URINE

In the cases of diabetic coma reported by Henry J. John, Cleveland (*Journal A. M. A.*, May 9, 1925), there developed a marked retention of urine, with an increase of the different metabolites of the blood, with an increase of the different carbon dioxide volume in the plasma, these conditions continuing for quite a long time in spite of large doses of insulin. After a few days, edema in the tissues began to develop. John says that persistently low carbon dioxide values in cases of diabetic coma may be due to edema of the tissues. The administration of hypertonic salt solution (Fisher's solution) is of value in cases of acute retention of urine associated with diabetic coma. The kidney complications in this case—urine retention, low phenolsulphonphthalein output and high urea content in the blood—ran parallel courses.

Functions of the Skin and Their Importance in General Medicine*

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In many general diseases skin manifestations undeniably play an important part. In the past this fact was frequently utilized for diagnostic purposes while the modern conception of disease prefers to rely more particularly on the more exact methods of the laboratory. This seems but reasonable.

The evaluation of changes in the skin, which are less pronounced, require more experience and even then a classification of the differentiations frequently presents difficulties.

The importance and the value of the *Relation of Changes in the Skin to General Medicine* as a scientific problem is quite another matter. In numerous diseases the corresponding changes in the skin are found with such regularity that a connection between the two is evident even though we do not comprehend the reasons nor the details. Out of the vast number of well-known skin manifestations we refer only to (1) the acute exanthematous infectious diseases; (2) the secondary stage of syphilis with its characteristic skin lesions, directly attributable to the excitant; (3) tuberculosis and pernicious anemia, examples of accompanying skin symptoms of a more secondary nature. Thus the clinical observation of the skin immediately leads to a study of its relation to general medicine.

I. CLINICAL EXPERIENCE

We know that the skin is an organ, perhaps it would be better to say, an organic system, comprising many individual parts which are closely related, and which are subject to a regulatory influence. It is highly probable that this regulation originates in and is exercised by some factor outside the skin. The coordination of the functions of the entire skin is sufficient evidence of such a regulation, a fact which should be kept in mind as being of primary importance.

The knowledge of the physiologic functions of the skin, regulation of body temperature, metabolism of the skin, perspiration, is established beyond doubt. The dependence of these

functions upon the involuntary nervous system has been definitely determined. From experiments with pilocarpin and atropin we know that the regulation of these functions does not lie within the skin itself, just as the secretion of gastric juices does not depend solely upon the stomach and the secretion of saliva is not influenced merely by the salivary glands but by the involuntary nerves controlling them. Physiologically the skin is recognized as an organ with individual functions. A normally functioning skin is prerequisite to normal health. As far as the pathology of the skin is concerned we are still somewhat nebulous.

We know that in other organs, for instance in the bone marrow, there are reserve forces, the same as in any other tissue of the body. The increase of leucocytes produced by the bone marrow in an acute disease cannot be considered as pathologic; it may represent merely an increase of the physiologic action of this organ. The result is a leucocytosis. This disappears if the body no longer needs it. Leukemia, tumorlike increase of one certain kind of cells at the expense of another type, manifested by a tremendous production of leucocytes, must be considered a pathologic condition. The question as to whether in case of infection the physiologic function is increased by taking advantage of the reserve forces is immaterial and is in no way connected with the problem as to whether this function merely evidences a healthy store of reserve forces or if it indicates a basic pathologic change. Consideration of the purpose only and not of the facts themselves would constitute a violation of the laws of logic. This point of view is important for conclusions as to any condition of the skin. Manifestations of disease require treatment. Any increase of function, however, should be encouraged, otherwise the operation of the normal resources of the body would be curtailed. Answers to the following questions may uncover the relationship of the skin to general medicine. When does a skin manifestation indicate that the skin itself is sick? When does a skin manifestation indicate that the skin is engaged in helpful resistance to a body enemy?

This subject is so vast that we shall limit discus-

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sion to the role of the skin in general infectious diseases.

The original idea of our studies was conceived from clinic experiences; thus also this paper is based upon clinic observations.

THREE GROUPS

Three groups among the general infectious diseases required attention: the first comprises those affections in which the skin is only accidentally involved and in which the skin condition appears metastatically; in this group belong such septic conditions as endocarditis, typhus, infection with pneumococci, streptococci and staphylococci, generally caused by a thrombophlebitic process, and some rare forms of a general gonorrhoeal disease. The excitants circulate in the blood stream. An occasional narrow lumen in one of the smaller vessels entails an embolism of circulatory bacteria, either in the skin, the lung, the liver, or in some other organ. Here the involvement of the skin is merely passive, no special functions being affected.

One example of a second group is found in the secondary stage of syphilis. Here the skin is markedly involved. Here the lesions are caused directly by spirochetes; no like lesions are observed in other organs as in the above described septic conditions. In this group of cases a definite and timely limited pathologic condition recurs with absolute regularity particularly in the skin. We are stating facts, knowing nothing of the underlying causes. Nor do we know, how many other *so-called* skin diseases are of the same nature. It is highly probable that these also are systemic diseases which at a certain stage of their development are limited partly or entirely to the skin. Surely, a certain relation of the skin to this particular process must cause this affinity. Some authors are of the opinion that the intensity of the skin manifestations, for instance in the secondary stage of syphilis, is indicative of the prognosis; in other words, it is assumed that the skin in comparison to the intensity of such symptoms gradually develops an immunity to those specific toxins.

To the third group belong the acute exanthematous infections, scarlet fever, measles, variola, etc. In these conditions it has never been possible to determine the presence of excitants in the skin. The epidermis is not the only seat of the disease. In scarlet fever, for example, the bone marrow system is invaded by bacteria, (the same as in pneumonia and in typhus), the throat is involved

but the manifestations of the skin are so typical and striking that for hundreds of years it gave the disease its name. That these diseases leave the patient permanently immune to reinfection is another clinical experience several hundred years old. Typhus infections develop immune bodies, nevertheless the patient is just as liable to contract the disease a second or even third time. Acute exanthematous infections, therefore, constitute a special group in this particular.

Another point of interest to this subject lies in the following: about 150 years ago Jenner succeeded in preventing the occurrence of small-pox by rubbing the content of a small-pox animal pustule *into the broken skin*. The result was a local infection and then, as a rule, life-long immunity. A *subdermal* injection of the same vaccine proved to be of no value. It afforded no protection, nor did any symptom of infection develop. The pustule produced by vaccination cannot be regarded as a manifestation of a pathologic condition only, it is merely evidence of the protective activity of the skin.

To a certain extent these conclusions apply equally to scarlet fever and to measles. We do not know whether the virus enters the skin or not, but we do know that the immunity reaction takes place in diseases with such skin involvements, so-called exanthemata. The skin *may be* the seat of the disease; it *certainly is* the seat of a part of the resistance, the cause of immunity acquired.

Clinical experiences justify these conclusions.

The skin, as a reflection of systemic disease, and, the skin, as the seat of immunization are the issues to be determined. Clinical experiences have proved beyond a doubt the basis for these conclusions; but a great many details have to be studied experimentally and settled before further conclusions can be drawn.

II. EXPERIMENTAL STUDIES

Many functions of the skin are closely connected with the involuntary nervous system, especially with the vagus, or rather with the entire parasympathetic fibres. Observations of the normal physiologic processes within the body demonstrate this; for instance, small doses of pilocarpin increase perspiration, while small doses of atropin diminish it.

An observation made in 1918 and but little understood at that time proved to have far-reaching consequences. This observation became the

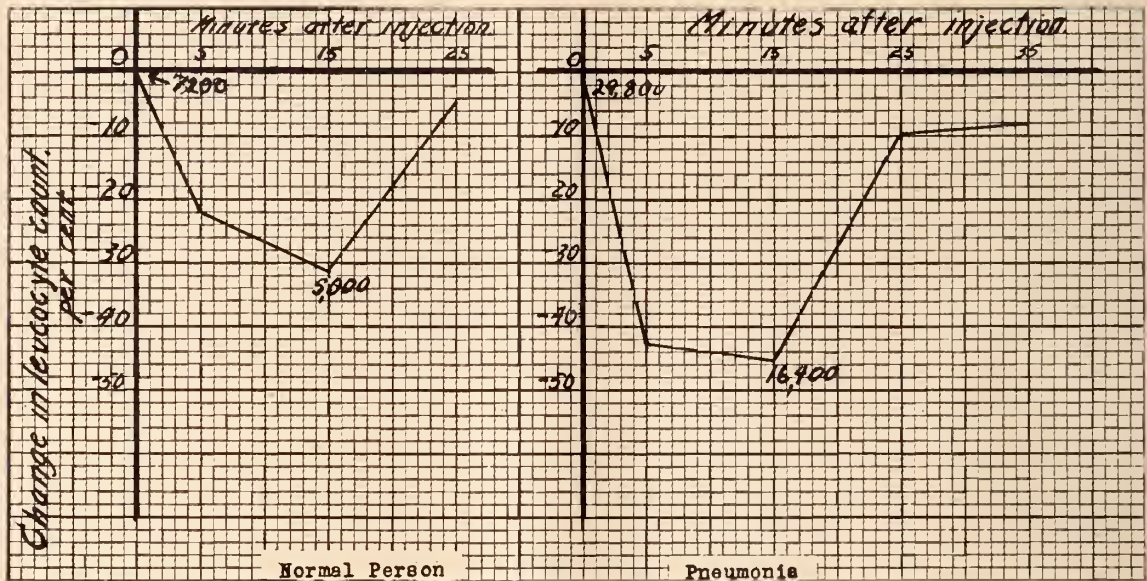


Table 1.

starting point of all these recent investigations in this field.

A patient suffering from chronic gonorrhoea with a small discharge containing few leucocytes, mucous and epithelial cells, was given an intradermal injection of a non-specific, non-tissue irritating protein: 18-24 hours after the injection a marked increase in excretion was observed. Microscopic study of this excretion showed large numbers of fresh, readily stained leucocytes and greatly resembled the picture presented by a fresh gonorrhoea. This reaction was observed in many other like cases by repeating such intradermal injection. Controls were made and an equal amount of the identical fluid was injected subcutaneously, intramuscularly and intravenously. Nothing happened. The dose had to be increased 50 to 100 times in order to produce a similar reaction via one of the other routes of injection.

This discovery opened a new field of study of the skin. Here was evidence of a relation between the skin and other distant organs which latter were responsible for the increase of the excretion. As subcutaneous injection proved useless for this purpose, this property was of necessity, proved to be inherent in the skin.

Continued study of the various factors led to a second finding. Intradermal injection of 0.3 c.c. Aolan produces peripheric leucopenia of short duration both in the healthy and in the sick. For a period of from 20 to 40 minutes the leucocytes decrease to $\frac{2}{3}$ to $\frac{1}{2}$ of the original counts.

The Tables I and II present only some examples of the quoted leucocyte findings after intradermal injections of 0.3 c.c. Aolan in the human. The curves show the decrease in the number of leucocytes during a period of 30-40 minutes after the injection, given in per cent of the original count. Absolute numbers will be found additionally at the starting point as well as at the lowest point of the curves. The reaction on the leucocytes is the same in normal persons as in patients suffering from pneumonia with usually large numbers or from pernicious anemia with its continuous original leukopenia. Even cases of leukaemia with an original count of 154,000 leucocytes show no exception.

Recent investigations which were conducted in this country have revealed that, due to a reaction of the sympathetic fibres, the missing leucocytes are detained for a short period in the vessels of the liver and in other vessels controlled by the splanchnic nerve. This latter phenomenon gave evidence of a similar reaction of the skin in a healthy body. This finding presents another phenomenon which depends entirely upon the activity of the skin and not upon the solution used for injection. Even the administration of air into the skin is productive of the same results, i. e., leucopenia of short duration. On the other hand, such a reaction cannot be obtained by subcutaneous injection of proteins.

Another series of examinations led to the same results from a different angle. If Aolan or saline

is injected into the skin the subcutaneous vessels become dilated and are soon filled with leucocytes, largely of the polymorphonuclear variety. If the identical substance is injected subcutaneously into the immediate vicinity of the vessels, no such reaction is observed; it cannot, therefore, be due to a direct chemical influence, but is to be attributed to some distant influence, acting by way of some connection between the skin and the vessels and involving no influence due to the transfer of a chemical substance. However this connection may be established, the parasympathetic fibres, dilators of the vessels are in some way affected.

The above described leucopenia of short duration, following intracutaneous injection, is also caused by a vessel's dilation, on this occasion, not in the skin, but in the area of the splanchnic nerve, more particularly in the liver. Both these reactions may be interrupted or prevented by paralyzing the parasympathetic system by means of atropin injections or by nullifying its action by an overstimulation of the sympathetic system with adrenalin. The correctness of these observations was verified in a large series of patients and shows the importance of the parasympathetic system in the production of far-reaching skin activities.

They further show the close relationship between the skin and the parasympathetic system and also lead to the conclusion that there exists a connection between the walls of the dilated vessels and the white blood cells, the numbers of which increase in these dilated parts. The results of these investigations speak for themselves. It was determined that the number of neutrophile leucocytes increased wherever the vessels were found actively dilated. The dilation, near and remote, was caused by the parasympathetic fibres and in both cases the skin was responsible for this phenomenon.

RELATION TO COLLOIDAL STATE OF SERUM

The following observations may be regarded as proof of the close relation of the skin, not only to the walls of the vessels and the leucocytes but also to the colloidal state of the serum:

(1) Syphilitic cases of long standing and with a negative Wassermann reaction were induced to give a positive Wassermann reaction, at least for some days or weeks, if injected intradermally with small quantities of a non-specific protein. (2) Changes were observed both in the sodium chloride and in the phosphorus content, as also in the uric acid of blood and urine after intradermal, but not

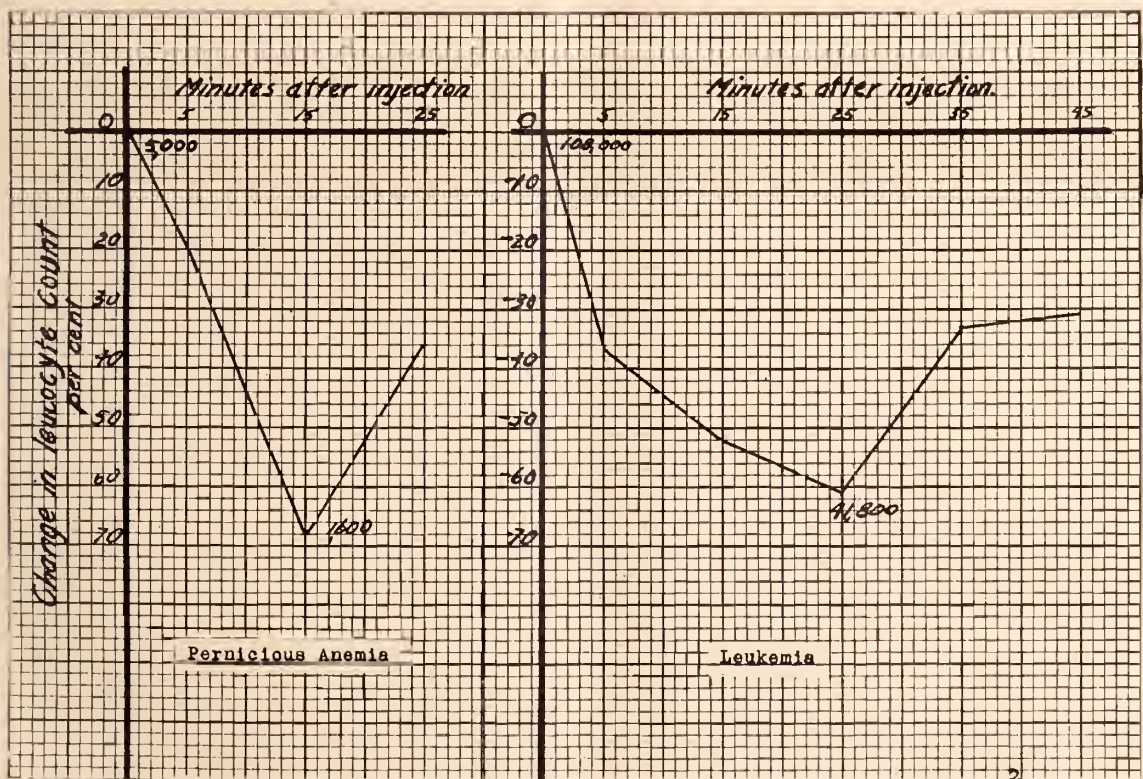


Table 2.

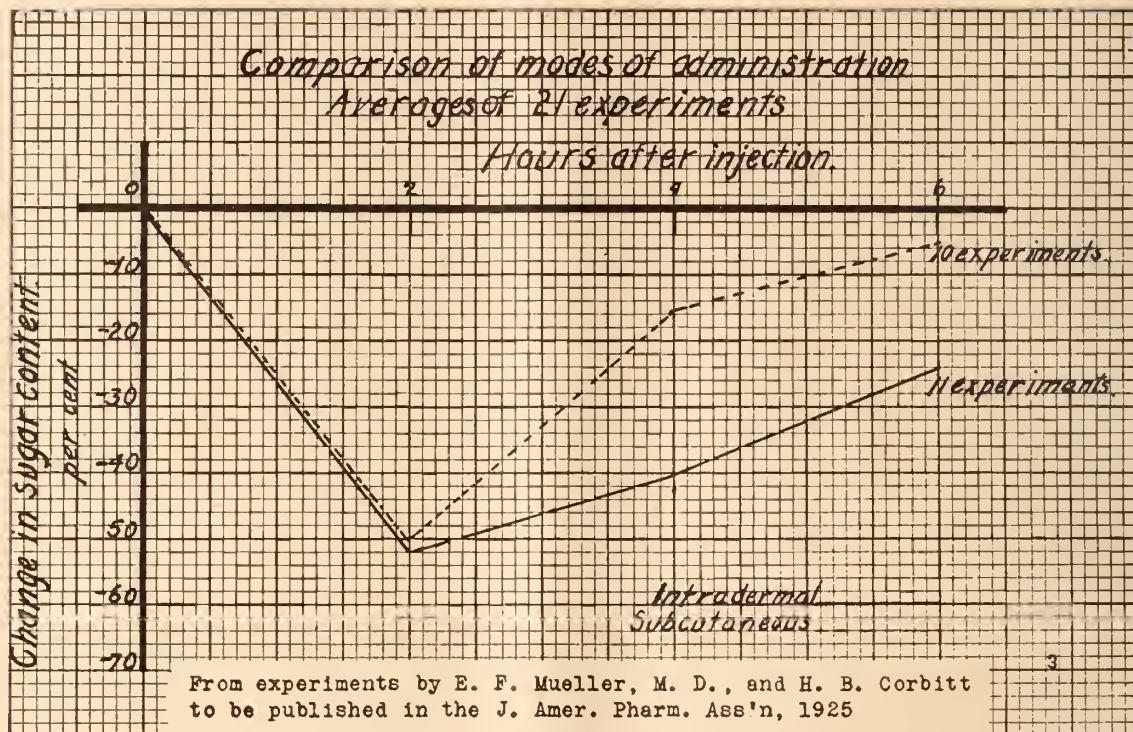


Table 3.

after subcutaneous injections of like quantities of protein as well as of physiologic salt solutions.

Our most recent investigations have revealed the following interesting facts: animals were given intradermal injections of insulin. The immediate effect was the same as when the subcutaneous route of injection was employed but the effect of the intradermal injections was found to be considerably prolonged, the most striking difference being found in the fourth and sixth hour after administration.

Tables III and IV demonstrate graphically these very unusual results. Table III shows in each of the two curves the average of 10 tests in animals which were injected with 0.5 units Iletin per kg. body weight. The differences between both curves, representing the results on the blood sugar content after intradermal and subcutaneous injection are evident without further explanation.

Table IV shows similar differences in the results obtained in the same animal representing only one of many samples. The effect of 0.5 units of Iletin on the blood sugar content is very pronounced after intradermal administration, while the subcutaneous and the intravenous injection of a like quantity is gradually less effective.

A few days ago identical results were obtained

in human therapy, thus confirming the preliminary animal tests. Here again the involuntary nervous system seems to be the causative factor. As far as we can conclude from our results to date, it is evidently a case of energy transfer by way of nerve fibres and not a chemical effect produced by dissolved substances circulating in the blood stream.

We have submitted but a few examples gathered from the experimental work carried on in the course of the last few years; they are intended to clarify skin properties which were recognized from clinical experiences.

The skin and the diagnosis of local skin reactions is a highly interesting field of study in which Americans have largely been the pioneers. The work of Dick and his collaborators on scarlet fever—the publications on the diagnosis of asthma—the studies on hypersensitiveness to foodstuffs—all involve the skin. The skin merely provides a reflection of certain processes in the body. The results of many series of experiments had to be taken into consideration, before it was possible to justify any statement in the nature of an explanation of these observations. The time is too short to give details. For instance, the exact relationship between the skin and asthmatic manifesta-

tions is undeniable. The skin reflects these abnormal processes in a local reaction showing a deviation from the normal absorption of various proteins. In asthmatic conditions the individual functions of the skin are involved; very probably by pathologic changes of the entire organism, manifested also by the same deviation from the normal in the lungs in the presence of asthma-causing agents which are not at all irritating in normal persons. The local reactions of the skin as well as of the mucous membrane of the lungs are merely reflections which become determinable through active interference with the vital processes of these organs. The more this fundamental idea—the need for considering the skin as an entity—receives consideration, the more skin reactions will gain in importance for diagnostic purposes.

Therapeutically, the activity of the skin may be divided under two headings: (1) direct action, (2) remote action. Diphtheria toxins *in vivo*, are detoxicated by the skin, *in vitro*, by macerated sections of the skin. Typhus toxins and typhus bacilli so completely lose their specificity that their intradermal administration does not lead to any production of antibodies, this being a directly opposite result from that following subcutaneous

injection. Neufeld recently succeeded in demonstrating the detoxicating influence of the skin in the loss of virulence of highly virulent bacteria when they entered the organism by way of a normal skin. This indicates a *direct antibacterial influence of the skin tissue* without the aid of blood cells. Indirect action manifested at a distant point is perhaps even more important; the action of the skin stimulated by purely non-specific agents in gonorrhoeal epididymitis affords a good example. The intradermal injection of a non-specific, non-irritating agent acts on the symptoms of epididymitis in the course of a few hours. Five to fourteen hours after injection there appears a marked redness at the site of inflamed area and at the same time a marked increase in urethral excretion, the latter, as a rule, having disappeared simultaneously with the development of the epididymitis; pain is relieved immediately and the swelling disappears within a few days.

The reason is as follows: through this intradermal injection the whole parasympathetic system receives a strong stimulus which quickly reaches the vessels controlled by the splanchnic nerve, and there follows an increase in the number of leucocytes in this area. In all other areas of the body

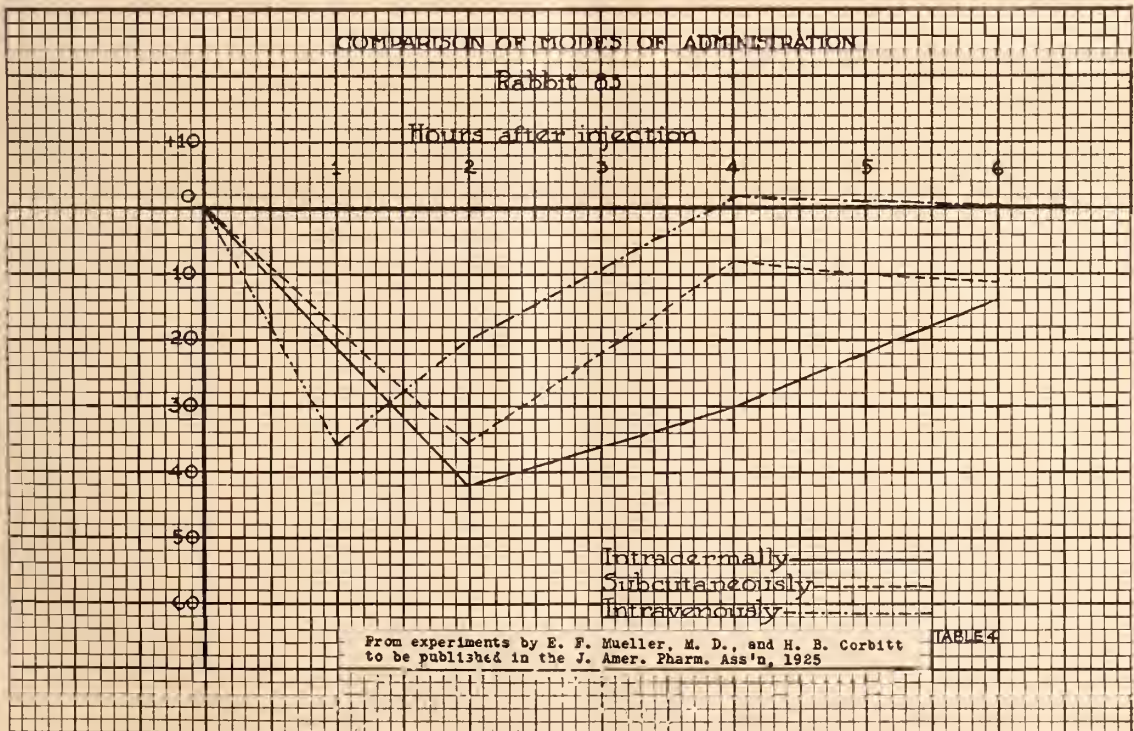


Table 4.

the stimulation is immediately counteracted by the action of the sympathetic fibres; this does not apply to areas of inflammation where the tonus of the sympathetic is abnormally low, so that it will not even respond to adrenalin. In this region, therefore, the stimulus which emanates from the skin can become fully effective. The vessels become markedly dilated and the result is a like reflex increase in the number of leucocytes and thus a stimulation of the natural process of healing, without even the smallest particle of the injected substance reaching the site of inflammation. This constitutes the fundamental importance of the given case. The remote action is due, not to the fluid injected, but rather to the action of the skin as an individual organ which conducted the stimulation by way of the parasympathetic system to a distant point. The remote effects (stimulation) of the skin are here apparent in their most pronounced form and cannot be induced by subcutaneous administration. These effects are additional to the above described direct action of the skin on living bacteria and their toxins, and to its reflection of the bodies reactivity by local skin reactions, which are diagnostically important.

SUMMARY

I have endeavored to give you a few chapters out of the present experimental work on the skin and its relation to the problems of general medicine which may be summarized as follows:

(1) The skin as an individual organ is closely bound up with the problems of general medicine. Skin functions, as known for centuries, play an important part in physiologic processes such as regulation of body temperature, perspiration, etc. These functions are controlled by the involuntary nervous system.

(2) In pathologic conditions the involvement of the skin becomes evident not necessarily because the skin is affected by the causative disease but because the cutaneous surface as a part of the body has contingently suffered a change in its vital processes. Thus the skin furnishes a reflection of the general pathologic conditions involving the body's metabolism. This reflection is manifested either by visible symptoms or by changes in the skin metabolism which latter may be made visible by introducing certain proteins. This is known as a specific local reaction, and is used for diagnostic purposes in disease of general changes of body metabolism (asthma, hypersensitiveness).

(3) Experimental work on the lines of local and far-reaching skin activities has determined: there is (a) a local antibactericidal and antitoxic property of the skin tissue itself; (b) a close relationship to the parasympathetic part of the involuntary nervous system and by this way to the subcutaneous vessels and to the vessels controlled by the splanchnic nerve. Every stimulus from the skin is manifested more or less at the site of those vessels, carrying certain influences to the leucocytes and to the colloidal state of the serum.

(4) If areas of inflammation exist in the body, non-specific agents, injected intradermally give rise to a reaction at the site of the infection; this may be used for therapeutic purposes.

(5) Certain specific agents (until now only experimentally proved with insulin) are enlarged in their specific action, when administered intradermally.

(6) The skin in its entirety, demonstrable hitherto only in some of its properties, represents a part of the body's resistance activity and is therefore to be considered as an independent organ of equal importance to others.

(7) The reactivity of the skin to specific mediums is valuable diagnostically. In therapy, the skin is utilizable intradermally, because of its immunizing properties and non-specific agents supply the medium for its stimulation.

SLEYSTER RE-ELECTED VICE-SPEAKER

Dr. Rock Sleyster, Wauwatosa, was again re-elected Vice-Speaker of the House of Delegates of the American Medical Association at the Atlantic City meeting. Wisconsin's other two delegates were both appointed to committees of the House. Dr. H. M. Brown, Milwaukee, was a member of the Reference Committee on Officers' Reports and Dr. Joseph F. Smith, Wausau, was a member of the Committee on Reapportionment of Delegates.

Dr. Wendell Phillips, New York City, is the new President Elect of the American Medical Association. His election was without opposition and unanimous. Dallas, Texas, was selected as the place of the 1926 meeting.

Vice-Presidency of the A. M. A. went to Dr. Phillip Marvel, Atlantic City.

Dr. Carey of Texas was elected to the Board of Trustees to succeed Dr. Oscar Dowling, New Orleans.

Psychology of Industrial Surgery*

BY HERBERT W. POWERS, M.D.,

Milwaukee

The psychology applicable to cases of industrial injury is simply the psychology of mankind as a whole, and the reaction of the individual to the stimulus of the injury and its attendant circumstances will be determined by the mental make-up of the individual, which in turn is conditioned by his heritage plus his environment since birth.

We will lay aside any consideration of heritage in this discussion, for it would lead too far afield, and perhaps seem too academic. Those of us whose practice requires that we constantly give heed to the mental makeup of our patients, see only too frequently the result of bad habit formation in the constant adjustments to our environment which make up our life experience.

The child's training in habit formation begins at birth and continues throughout life, but it is most handicapped or most helped by its experience and training in the earlier years especially those of the ascent of childhood and again in early adolescence.

The many minor accidents to which all small children are subject offer a fertile field for development of good or bad reaction to elements of environment which are not subject to control. The parents, who upon their small child's receiving a fall from a chair offer a fulsome sympathy with immoderate consoling and petting, and who "whip the naughty chair" are thereby establishing a bad type of emotional reaction, magnifying the incident in the mind of the child and teaching it resentment against something beyond its power to affect, whereas, an examination of the site of injury, a soothing word and admonition to be careful in the future would much better train the child to meet the next similar occurrence with more fortitude, and with a little less need of assistance.

I am aware that stated in this simple manner, such an incident may seem trivial, but the multiplicity of such incidents in childhood offer a splendid opportunity for character building, and bad handling of these situations is, I think, one of the great elements in producing the uncontrolled emotional states of the hysterical, later in life.

SYSTEMATIC EXERCISE NEEDED

An anxious mother will often ask to have her nervous child excused from regular exercises at school. This is usually a mistake, for nervous children, even more than normal children, require systematic muscular exercise. Moreover if the child be not permitted to do these exercises with the others, a beginning is made for an inferiority complex which may become a serious handicap.

The boy who learns to tumble in a gymnasium, to stand the pain of boxing and wrestling, and to keep his temper while engaging in these exercises, will have subjected himself to a training which cannot help but stand him in good stead later in life.

One reason why women are more prone to neuroses in later life than men, may lie in the lessened opportunity which girls have for bodily and psychic hardening in the games which they play and the life which they lead as children. Children should be given opportunity for normal reaction to their natural instincts, and impulses, to be active in play and work, to express their emotions. They should be trained to control their activities and impulses. Natural and helpful control is not by repression and direct inhibition, but rather by indirect control. Control means, here, utilization of the nervous energy in developing a new and healthful form of activity that may take the place of the unwholesome activity. Concentration upon the thing in hand, and an active attitude in the face of difficulties is an important attitude to develop.

The child who has normal habits of reaction to his impulses and feelings, who has many interests and the power of self control furnished by them, the ability to concentrate attention on the present, habits of orderly association, the active attitude in the face of difficulties, a steadfast purpose for service and co-operation and a sense of dependence and unsullied honor, is not only sane, but prepared for happiness, efficiency and a sound reaction in times of stress.

FEAR A CAUSE

Mankind is endowed with certain instincts most important of which are those of procreation and

*Read before the Milwaukee Academy of Medicine, 1925.

self-preservation. The latter one is served and supplemented very largely by the instinct of fear which is a fundamental instinct easily aroused and not easily controlled. This instinct is frequently brought into play in the industrial accidents and such disturbance if of sufficient degree, constitutes a psycho-neurosis. An individual who has perhaps been employed for many years and has certain social responsibilities as a wife and children, meets with an accident which incapacitates him for several months, being deprived of occupation both physical and mental, his mind is prone to occupy itself with phantasies and fear enters in. He now begins to conjure many pictures of calamity should his earning power be permanently lost and as the time for settlement approaches he becomes panicky and develops a fear state or anxiety neurosis which soon dominates all of consciousness and completely overshadows the physical injury. This is the genesis of a psycho-neurosis.

In the development of fear states, not infrequently the patient is greatly influenced by some member of the family, usually the wife and I have many times seen instances in which coddling, petting and constant suggestion by the wife has been the cause of an anxiety neurosis in an individual who was otherwise disposed to react manfully and properly to an industrial accident. The effect of constant reiteration of such admonition as "you might faint," "you are not strong enough," "you know your arm hurts," "be careful of your back," "you must not get on the car alone," together with manifest troubled solicitude upon the part of the wife may be imagined.

And here comes into play one of the psychological "pull backs," the mother infant complex which persists in some individuals and in which the wife finally symbolizes the mother, the patient in such instances easily reverting to a child like dependency. The Germans express this in the term that the "navel cord has not been cut."

FATIGUE

These psycho neuroses are usually described under three heads, psychasthenia, neurasthenia and hysteria. Without going too extensively into the symptoms of each of these it may be stated that fundamentally neurasthenia is marked by an increased liability to fatigue. The tired feeling that comes on with a minimum of exertion, and is worse on arising than on going to bed, is its dis-

tinguishing mark. Sleep which should remove the fatigue of the day does not. The victim takes half the day to get going, and at night, when he should have the delicious drowsiness of bed time, he is wide awake and disinclined to go to bed or to sleep.

This fatigue enters into all the functions of mind and body. Fatigue of mind brings lack of concentration and inattention. Hence loss of memory, and this in turn an inefficiency that worries the patient beyond words, as portending a mental breakdown. Fatigue of purpose brings listlessness and shirking. Fatigue of mood brings depression and liability to worry. To be neurasthenic is to magnify the pin pricks of life into calamities, and to be the victim of an abnormal state that is neither health nor disease.

In addition to this central group of symptoms are pains and aches of all kinds, changes in the appetite and disturbed sleep and above all, and fundamental to the disorder is fear. This fear takes two main forms: First, worry over the situation in general, fear which extends to all the comings, goings and doings of life, fear which is both a cause of neurasthenia and a symptom, and second, a special form of worry called hypochondriacism, which essentially is fear about one's own health. The hypochondriac magnifies every flutter of his heart into heart disease, every stitch in his side into pleurisy, every cough into tuberculosis, etc.

HYSTERIA

With psychasthenia we are but little concerned, while with the third great psychoneurosis, hysteria, we are frequently brought into contact. Briefly the essence of hysteria is an emotional instability plus a condition in which imagined situations take the place of reality, and become for the time being realism, to the patient; this represents an extreme type of faulty and vicious reaction to environment, practically a retreat, and is in the majority of cases the result of faulty training and habit formation. Fundamental in the personality of the hysteric is the emotional instability, with an egotistic, easily wounded nature, craving sympathy and respect, admiration and achievement, but unable legitimately to earn them. Out of the longings and desires of these individuals for the attention which they cannot earn, come the bizarre paralyses, queer losses of sensation, which may take the form of hysterical

blindness or deafness, fainting spells, trances or convulsions whereby they gain the coveted need of sympathy and solicitude.

CLASSIFICATION OF FUNCTIONAL TYPES

I believe that as we see these cases of functional neuroses we may classify them as:

First. Traumatic Neurasthenia, a condition directly due to injury as occurring for instance in a severe head injury with concussion, the severity of which may be measured by the unconsciousness, and amnesia. If such a patient is not kept at rest in bed for a sufficient length of time, he will after getting about suffer from headache of the neurasthenic type, that is more or less continuous and of the vertex type or pressure band about the temples. He is easily fatigued and can not concentrate, fears his mind is affected, becomes depressed and anxious. Such a case, if the patient were responsible for himself, would be easily cured by rest and reassurance.

Second. "Anxiety Neurosis." These patients give a history of injury to any part of the body, the head perhaps being the most common site. They differ in no respect from cases of anxiety neurosis, such as we meet in ordinary practice without any history of injury, or from the most common type of shell shock victim met with during the war. They complain of constant "pressure" headache, insomnia, fatigue, giddiness, tremors, inability to concentrate, loss of appetite, and pain and tenderness at the site of injury wherever it may be. When you examine their eyes they blink continually, and each voluntary movement they are asked to perform is carried out feebly, hesitatingly, and perhaps tremulously. Their whole appearance is one of anxiety and misery, but careful examination reveals no evidence of organic mischief.

Third. "Spinal." The third group comprises a much smaller number of patients but the picture presented is characteristic. It may be labeled the "Spinal" or in more vulgar but descriptive language, the "my poor back" group. The patient invariably walks into your room leaning on a stick in one hand, with the dorsum of the other placed over the lower part of his back. You know at once that the site of his complaint is the spine. In addition to their characteristic attitude, they often present also the symptoms of an anxiety neurosis. Again, examination reveals no sign of

organic disease, but there is a superficial tenderness over a great part of the spinal column.

Fourth. "Hysterical." In this group the anxiety neurosis is often associated with some definite hysterical symptom, such as hemiplegia, monoplegia, paraplegia, and so forth. These cases are not very common and their occurrence is immaterial to the question under investigation.

The development of neurasthenia has no constant relationship with the site of injury. The nervous symptoms are more likely to follow a blow on the head, or a strain of the back, but they frequently present themselves after an injury to a foot or hand. Direct injury to any part of the central nervous system, therefore, is not necessary for the production of neurasthenia. On the other hand, it is not unreasonable to suppose that the awe with which the lay mind regards an injury to the skull or to the spine may be sufficient to account for the frequency with which such injuries are followed by neurasthenia. The latter may follow trivial injuries to the limbs as well as a severe concussion. But there is one exception to this rule, an exception which is not without significance. It is rare to find an injury which inflicts permanent physical disablement on a patient followed by neurasthenia. The man who loses an arm or a leg as a result of an industrial accident does not suffer from an anxiety neurosis, unless of course he has entirely other reasons for doing so.

THE INCIDENCE

So far a consideration of our experience in cases of traumatic neurasthenia allows us to form two definite conclusions. In the first place the clinical picture of traumatic neurasthenia is identical with that of anxiety neurosis. In the second place, the incidence of neurasthenia on trauma is quite independent of the site or severity of the latter. On what does this incidence depend? This is a question which we should be able to answer. We must find a factor which is always present in cases of traumatic neurasthenia, and which is generally absent when trauma is not followed by the neuropathic features we have described. From what I have already said, it would seem impossible to find that factor on the physical side. Any attempt to correlate the part injured or the nature of the structural injury with the evolution of neurasthenia has been shown by experience to be doomed to failure. Naturally we turn for light in other directions, and the question of the patient's inher-

ent or constitutional reaction automatically engages attention. We may be tempted to seek for and find in each patient suffering from traumatic neurasthenia some evidence of hereditary nervous instability or of previous instances of inability to adjust himself to changes in environment. There can be no doubt that such a proposition is attractive, and that it contains at least a germ of truth. But does it satisfy our minds as *the* factor determining the development of neurasthenia after trauma. I am afraid that the answer is in the negative, willing as I am to allow it its legitimate due.

Having seen a number of such patients, I believe that the one factor having a more profound influence than any other is that of responsibility. Is the patient responsible for the injury and has he to shoulder the burden of its results, or can he shift the responsibility and the burden on to others?

If he can shift the responsibility then we have the initial preparation of the soil favorable to the growth of neurasthenia. It is the story of slipping and falling down stairs through our own carelessness, or of doing so as the result of a push, in the latter case the emotion of anger and the sense of injury are added to the physical discomforts and are likely to prolong the disablement.

Accidents and injuries are among the commonest incidents of every day life, and we have all seen many; who has seen one that resulted in neurasthenia where the responsibility rested solely upon the patient?

Traumatic neurasthenia is almost entirely limited to railway accident cases, workmen's compensation cases, automobile accident cases and war pension cases.

Who has seen a football injury, a hunting accident, a fall on the ice while skating, result in neurasthenia?

I have spoken of a favorable soil for the production of neurasthenia: who plants the seeds? Like the pollen of rag weed they are in the very atmosphere. The physician says, "My that was a narrow escape, a little lower down, and you would have been done for." The patient cogitates upon this chance remark and becomes terrified at the thought of what he has escaped, a sympathizing friend tells him that Smith had about the same thing and has never been the same man since, his wife makes him comfortable, pets him, and scolds

against the employer, so there grows up resentment against the employer, fear as to the future, belief that the injury is probably worse than the doctor admits, a pain here or a pain there suffices to keep him on the alert for complications. Fear and anxiety keep him awake at night and the vicious circle is complete.

He now finds safety in his status of weekly compensation and fears to face a settlement, dreading the necessity of assuming responsibility, hence as the time set for settlement approaches the symptoms tend to become exaggerated.

As long as weekly compensation continues just so long will the symptoms continue unabated, and not until the patient is put upon his own responsibility may any attempt at recovery be looked for.

How shall we explain these cases to the courts and workmen's compensation officials? There appear to be two schools of thought; one favors the view that a physical injury of any degree of severity and inflicted at any site, may produce a physical condition of the nervous system, with characteristic symptoms but without any morbid anatomy, to which the term traumatic neurasthenia is applicable. The other view is that the signs and symptoms of traumatic neurasthenia are those of an anxiety neurosis, and that it should be regarded as an emotional state, dependent not on any physical disturbance caused by trauma, but on a number of psychological factors. They would characterize the condition as a mental state accompanied by brooding, weakness of will and fixed ideas. Indeed in many medico-legal cases this definition has prevailed, and it has been held not a necessary result of the trauma. It is for legal agencies to determine where justice and equity lay in this cause, it is for us to assist them by clarifying the situation in our minds, and being able to give proper definition when called upon to render such assistance.

CONCLUSION

In conclusion I wish to quote Osnato who in 1919 investigated a series of 25 cases of traumatic neuroses, which had persisted for from six months to three years, until settled by litigation. He reviewed them with reference to final outcome after settlement and found that twenty-three had recovered and were working, one was not working and still complained of functional symptoms, one could not be located.

Osnato says: "In traumatic neuroses the reac-

tion is apparently caused by fear with immediate injury to the nervous system by actual trauma, or later injury by sleeplessness, restlessness, and a general physical and psychical depression. Many of these individuals are essentially normal, the in-

jury being almost entirely responsible. In hysteria, the reaction to the injury is probably not determined by the pathology of the injury, but is an entirely instinctive mal-adjustment in individuals who are mentally and physically inferior.

Industrial Surgery—Its Aims and Accomplishments*

BY RALPH KAYSEN, M.D.

Milwaukee

It is the purpose of this paper to present to the members of this society a brief resume of the fundamentals and actual workings of the Wisconsin compensation act. There is a general lack of information among the medical profession as to the meaning of the act, and the duties and responsibilities of the profession in its administration. An endeavor has been made to briefly set forth the salient features pertinent thereto.

The general subject of industrial surgery is and should be of great interest to all medical men, since to a greater or less extent they at some time are brought into direct contact with and are required to be familiar therewith. Their interest includes the professional, economic and social aspects of the subject; professional because of the many medical problems presented, economic because of the direct and far reaching effects on industry, and social because of the many problems involved concerning the personal, family and public welfare of the injured man.

The comment has been made by many medical men that industrial surgery is of little interest to them because of the infrequent contact that is had by them with industrial accidents and diseases. In recent years and with ever increasing frequency these contacts are occurring with the very men who have made these comments, by reason of the fact that more and more, all branches of the profession are being called upon to minister to the aid of the injured and sick in industry.

Comprehensively, there are four main divisions of the subject to be considered: First, the status of the sick or injured person; second, that of the employer; third, that of the insurance carrier and finally that of the industrial commission. There is a close correlation between these different divi-

sions and an understanding is necessary of their relationship one to the other.

Our interest in the injured person has of prime importance the care of his injury, his relief from pain and suffering and his restoration to as nearly as normal a state as existed before his injury. Thought must be given to the economic side, namely the loss to him of time and money by reason of his temporary and possibly permanent disability. Care must be exercised in the consideration of his personal feelings and view point, and in this consideration much depends on the attitude of the attending surgeon.

Upon the employer rests the responsibility of the procurement of proper medical and surgical attention for his employee, in order that a proper morale may be maintained in his plants and to the end that there shall be no serious economic loss in his business.

The insurance company is an institution which has for its business the application of the various provisions of the industrial act. It takes over for the employer the details necessary in its operation and arranges for the practical necessities. It pays the medical and surgical costs, the hospital charges, compensation to the injured man and all other necessary costs. It receives and transmits all reports and acts in general as the agent for the employer.

Briefly, the compensation act requires that when an employee becomes injured he be paid certain amounts of money in the form of weekly compensation during his disability period and certain specified amounts at the end of that period, for degrees of permanent disability remaining. It provides for the payment of all medical, surgical and hospital costs made necessary by the injuries or industrial diseases, and finally provides for certain indemnities to cover different degrees of permanent disability. Under its provisions, when an

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employee receives an injury he reports the same to his employer who presents to him a panel or list of surgeons from which he may choose the one whom he wishes to attend him. This panel or list of surgeons varies according to the size of the community in which the injury occurs, ranging from five names in the largest cities to one or two in the smallest communities. It is then the duty of the surgeon so chosen to institute proper treatment for the care of the man, this treatment to consist of the best which skill and modern practice dictates. Should, in the judgment of the attending surgeon, hospital treatment be necessary such must be provided. The surgeon continues the care of the injured man throughout his disability period and at the conclusion thereof instructs the man to return to his former employment and provides the insurance company with a final report of the man's condition, which report includes a statement of any permanent disability existing. Upon the receipt of such final report the insurance company arranges for the payment of all medical, surgical and hospital costs which have been incurred and tenders to the injured man the amount of money which is specified by the industrial act to cover such percentage of permanent disability as has been estimated by the attending surgeon. Should the injured man or the insurance company be of the opinion that the estimate of disability which has been made is not a proper one, either has the privilege of making application for a hearing and proper adjudication of the case before the industrial commission. The industrial commission then sets a date for the hearing of the case, at which time all pertinent testimony is received and its conclusions are drawn up in the form of an award and the case disposed of.

It has been noted that the surgeon is paid his fee by the insurance company, such being the case it frequently happens that there is an unconscious tendency for the surgeon to feel that his responsibility is perhaps more to the insurance company than to the injured man. This condition should be rigidly guarded against at all times and the fact should ever remain uppermost in the mind of the surgeon that his entire responsibility is to the injured man just as in private practice. The object of treatment is for the earliest possible relief of pain and suffering, the providing of the best possible care for, and the return to work in the

shortest reasonable time of the injured man, with the least possible disability remaining.

As in private practice, the surgeon should feel free at all times to use any and all of the modern methods and appliances regardless of cost and to call in consultation, when he deems it necessary, any specialists which the case may indicate. It is the policy of practically all the insurance companies to impress upon the surgeons who are caring for men under their jurisdiction that they do not wish to be niggardly in providing consultants and approved surgical appliances, experience having taught them that such procedure works to the greatest economy.

The final estimate of the degree of permanent disability existing is perhaps the most difficult portion of the attending doctor's responsibility and is a proposition which requires careful study, much experience and the correlation of many technical details. Upon this estimate depends the proper recompense to the man for a lasting disability and at this time the surgeon must be absolutely unbiased. It is necessary for a sick or injured man to be disabled for a period exceeding seven days before he can commence to receive compensation, and unless his temporary total disability period is in excess of twenty-two days he does not receive any compensation for his first week of disability.

The practice of industrial surgery has every reason to be maintained on a high order. As provided in the industrial act, the patient must conform to all the orders and reasonable demands of the attending doctor who therefore is in complete control. In private practice hospital treatment and proper surgical appliances are often difficult to secure on account of the expense involved; in industrial practice all such reasonable expense is provided for. The mental attitude of the patient is not the disturbed one of the disabled man whose income has entirely ceased, for during his disability period support for him and his family is provided by adequate compensation payments, and looking toward the future, the man is easy in mind in the knowledge that should he suffer any degree of permanent disability such will be equalized, in so far as possible, by the payment of a proportionate amount of money. It frequently occurs that the surgeon treating a case feels that the interest of the patient will be best served and his own confidence reinforced if consultation with one or more other physicians or surgeons be available, such con-

sultation may be had and is urged by the great majority of insurance companies. In addition to all this, the earnest and sincere co-operation and help of the industrial commission in its desire to provide every possible agency for the proper care and restoration of the injured man, is a factor constant in each case.

Industrial practice is roughly divided among three groups of doctors: The largest group comprises men having offices in the neighborhood of the industrial plants and who combine this work with their private practices. These doctors are on the firing line, so to speak, and to them falls the most difficult portion of the work, they must be prepared to give emergency care at all times, must maintain a constant personal supervision over their cases and must persuade the injured man to return to his work at the earliest moment consistent with his welfare, they must also execute promptly the trying paper work consisting of the various reports necessary in each case. The second group consists of men who are devoting full or part time to industrial plants under a salary or contract. These men usually have the advantages of a plant hospital or well equipped dressing room, a welfare supervisor to keep in constant touch with the cases and the assistance of a nurse and clerk. Many such plants are self-insurers and deal directly with the injured man. The third group consists of men who have had a wide experience with industrial cases and who are called upon often to make estimates of disabilities, to prepare reports for, and to appear before the industrial commission. This group comprises the men who act as consultants for various insurance companies and they are required to exercise the utmost care in presenting cases before the commission, so that justice shall be done both to the injured man and the employer and that the commission may not be misled. In all cases an estimate must be made of the proper length of the total temporary disability period. This constitutes the time necessary for healing and terminates on the day the injured man returns to his employment. It often happens that the healing period must be extended to include a period of temporary disability, during which time the man may work only a portion of a day, until the time arrives when the maximum improvement obtainable is reached. When the stage of maximum improvement is reached the final estimate of permanent partial or total disability is made. It is appro-

priate to interject here the fact that one of the major requisites in the treatment of the injured and sick in industry is to return the man as nearly as possible to his former status, with his disability reduced to the minimum. Late years have provided us with many aids to this end, such as physiotherapy, occupational therapy, etc. It is strongly urged that advantage be taken of these adjuvants to the usual treatment in every case having indication for such. Experience has taught that in the great majority of cases so treated, material reduction in existing disability has resulted.

It has been properly stated that the estimate of the degree of permanent disability is a difficult matter. The various injuries of importance in making such estimates are fractures, joint traumatism, soft tissue disturbances—involving scars, nerve destruction and disfigurement—and head and body injuries. Fractures and joint traumatism often leave deformities, weakened contiguous structures and partial ankyloses, the latter being due to the necessary immobilization during the healing period. In making the estimate of permanent disability of such it is necessary to note the limitation of motion, caused by the deposition of fibrous tissue and mechanical interference, the amount of pain involved and finally the amount of loss of function of the limb or organs. Where soft tissues are concerned attention must be directed to a possible nerve involvement, atrophy and a consequent loss of function. Burns and lacerations result in cicatrices producing loss of function and disfigurement, the latter constituting disability if of such a character as to mitigate against the man's securing proper employment and a wage loss resulting therefrom. Nearly all head and back injuries involve neurological features, consequently the opinion of a neurologist is required in the determination of the percentage of disability. Necessarily the estimation of disability resulting from loss of hearing and of sight belong to the field of the eye and ear specialist. The factors in making an estimate of disability are based on the loss of function of any part of the body as compared to a similar normal part, not, as is so often understood, upon the interference which such disability occasions with any given occupation. To illustrate: Given a watch maker and a day laborer, each having an injury to the index finger of the right hand which results in a percentage of permanent disability—this percentage will

be estimated as the same in either case and is based upon the loss of function of the member, rather than the comparative loss of earning power in the two different occupations. The percentage of disability in extremities is determined by comparing the existing loss of function in the extremity with, and compared to, amputation at the nearest joint of the same. To illustrate: Given a fracture in the lower one-third of the femur resulting in a deformity and loss of function of the leg, the percentage of disability will be estimated as compared with amputation at the knee. In order to determine the percentage where the physical ability of the entire body is involved, comparison of loss is made with a state of total inability to do work of any kind. Conditions often arise in which the subjective symptoms of pain alone are complained of and in which no pathological foundation is discernable; again conditions arise in which it is unreasonable to believe that the symptoms complained of have any foundation and one strongly suspects malingering, and in still other cases distinct organic nerve disturbances are manifested; in all such cases a thorough neurological survey must constitute the basis of a proper estimate of disability.

The medical profession owes the industrial commission a great responsibility. The commission necessarily must base its findings and awards to a large extent on medical testimony, therefore it behooves us to use extreme care in making a careful, painstaking and unbiased preparation of each report and all testimony which is to be presented. The opportunity for observing the integrity and ability of the various physicians and surgeons appearing before the commission has resulted, in some instances, in regrettable conclusions by the members thereof and it is to the lasting shame and disgrace of our profession that such rare instances have arisen. The commission has expressed itself in countless public and private utterances as being deeply impressed with the underlying sincerity, efficiency and fairness of the great majority of the profession with which it has had contact, and it is probable that the few departures from this status may be explained by lack of information and understanding of the requirements of the commission rather than maliciousness.

The testimony of a medical man before the industrial commission differs from that before a

court of law, in that by an order of the commission, information pertinent to the patient and his injury may be divulged while in a court of law the statutes restrict the privileged testimony. This latitude of testimonial privilege, however, is not allowed for the purpose of betraying knowledge gained through professional contact, which will be harmful to the injured man, but is particularly designed for the purpose of the commission procuring all proper information relative to the injured man's disability.

A discussion of this subject properly includes some mention of professional fees. It is the consensus of opinion that with a few exceptions the fees paid by insurance companies are adequate. It is the policy of these companies to pay the full worth of competent services. The majority of doctors doing industrial work, do so on the individual case fee basis, and this plan is generally considered more desirable than that of a salary or premium percentage basis.

In conclusion there is a constant effort being made by labor organizations, groups of employees and some members of the profession to change the existing law as concerns the selection of the doctor by the employer, the contention being that the selection should be made by the injured man. The industrial commission has made most exhaustive investigations and has the decided opinion that the present plan is to the best interest of all concerned. In order that the commission may have the necessary support in its attitude in this matter, and that it may maintain its high degree of proficiency in administering the compensation act, it behooves each member of the profession to take a friendly and helpful interest in lending his support, to the end that the community may best be served.

The aim of industrial surgery is to provide a medical service for the benefit of the injured member of, and for the commonwealth, intelligent, proficient and sincere, and to adhere to the motto of every doctor in every land: "Service to Humanity." Its accomplishments are those for which the sincere and industrious efforts of well meaning men have striven, and our hope is to carry on in our effort to continually elevate the standard of excellence of a work worth while.

COMBINED GASTRIC AND DUODENAL ULCER

In approximately 7,500 roentgenographic examinations of the gastro-intestinal tract in the last three years. Jacob Buckstein, New York (Journal A. M. A., May 2, 1925), has seen only three cases in which both the roentgen ray and surgical exploration demonstrated the presence of a combined gastric and duodenal ulcer in the same patient.

The Industrial Surgeon*

BY ERNEST W. MILLER, M.D.,

Milwaukee

When asked to present a paper on some phase of industrial medicine and surgery, I chose the subject of the Industrial Surgeon especially to emphasize a title which in my opinion should not exist. Such a title is clearly a misnomer, even though a surgeon may be devoting his entire time and attention to this particular field. Medicine or surgery as applied to the industries is much more applicable. The old term Company Doctor or Company Physician has long enough suffered the stigma of criticism and has always, to my mind at least, carried with it some unfavorable application and up to the present time the title of Industrial Surgeon is practically synonymous with the old title of the Company Doctor.

I shall not undertake to detail the duties of a surgeon in the industries, since such a review would be practically identical with a treatise on emergency surgery or first aid and it is not my intention to consider at this time the minor surgery which undoubtedly makes up ninety per cent or more of the work of the surgeon in the industries, but rather to discuss the larger and more serious problems which confront the surgeon as such.

True it is, that we have occupational diseases attributable to conditions existing in the industries and just as true it is that we have accidents which occur as the result of special hazards of employment and more true is it that disease and accidents are frequently merely incidental to the daily routine of individual industries, but to attempt to specialize in these conditions without the highly essential foundations of general medicine and surgery, is beyond my comprehension.

The internist, the oculist or aurist, the urologist or surgeon, is equipped to care for the conditions arising out of the industries only in proportion to his general or specific abilities in his chosen field.

There have been attempts made in several states to establish schools for industrial surgeons and reported to have a short circuited route to a medical degree in such a course. Three or four of our states have already legislated against such possibilities.

The function of the surgeon in industries is primarily one of human economics with certain considerations for effecting monetary economies to the industries themselves. In order to best accomplish such a result, the close contact of the surgeon and any industry must be accepted as an hypothesis. Such contact affords the only satisfactory solution of proper systematization of the work and standardization of the treatment and without either of these no surgeon of the industries can attain great success.

EARLY INCEPTION

The surgeon in the industries had its inception in this country with the early logging camps and isolated mines. It was impossible to keep intact a force of men without furnishing some sort of medical supervision and care. More than fifty years ago such conditions prevailed and necessitated this step, due as I have said, to the isolation of the camps and further due to the ravages of certain diseases at that time and so far as the accidents were concerned, due to the distances to be travelled and inadequate means of transportation.

This system continued and was developed notwithstanding the fact that many of the handicaps of these industries were removed and with the progress of industry and in many instances the foresight of our legislation, medicine and surgery in the field of industry has been elevated to considerable heights, with much room left for improvement. I am free to admit that the laws regulating injuries and sickness have done more to advance medical science in these fields, than anything prompted or sponsored by the medical profession itself.

What is true of the various industries where direct control of the situation is possible, is also true of those industries whose accident situation is practically controlled by some insurance company. Too many insurance companies operating in our own city have little or no possibilities for the proper relation between the surgeon and the insurance company. We hear so frequently of the Home Office being located elsewhere. Too often it is necessary to defer action pending authority for undertaking procedures which should be left

*Read before the Milwaukee Academy of Medicine, 1925.

entirely to the discretion and judgment of the attending surgeon. Such a situation only strengthens my opinion as to the necessary qualifications of the surgeon in the industries.

Sooner or later we may reach the ideal when medical men will be properly classified, based upon their individual abilities along certain lines.

I am in no way attempting to establish myself as a surgeon of industries, but nineteen years of continuous part time service in the industries has furnished me some food for thought and reflection and has forced me to draw some conclusions. It may not be amiss to say a word about introspection and self satisfaction with our way of doing things.

The surgeon of the industries is beset with many pitfalls. His work is under closer scrutiny than that of the general practitioner, although his end results are the true measure of his ability, quite largely as is the case with the family physician, and yet in the traumatic field many demands are made which give an exceedingly close check on diagnosis, progress and prognosis in each and every case. The existence of such conditions makes it highly essential for the surgeon of the industries to take inventory at frequent intervals of his procedures in any given class of work and to make diligent search of all literature, in order that the injured may receive the fullest benefits of such information. I do not mean to infer that the general practitioner or physician in any other field need not consider the same introspection, but with the rapid progress in the industries, it has necessitated rather high tension methods to accommodate the facilities of the surgeon of the industries to the rapidly changing machinations of the industrial world.

BROAD EXPERIENCE ESSENTIAL

I do not advocate that only a selected few should be permitted to enter the realms of mystery of the accident world, but rather that a great number should see the necessity of a broad general experience in surgery, rather than attempt a specialized field for the care of injured employes. This should apply particularly to the younger medical men, since the older men in the profession cannot but confirm such an opinion. I am convinced more thoroughly from time to time that some medical men doing industrial work have failed to familiarize themselves with the proper treatment of even minor injuries.

A committee of the National Conference Board

has but recently published a report on first aid. Their report shows among many other things, that since iodine has been largely eliminated as a first aid treatment, wound infections have been reduced from seventeen per cent to one and one-half per cent and yet we see wounds almost daily which have received a copious iodine treatment as a first aid measure.

To revert for a moment to the contact of the surgeon and the industry. Such relationship should be stressed in the proper equipment and maintenance of first aid rooms, adequate nursing, a general understanding of the attitude of the executives to the employed personnel and in a thorough knowledge of the details of the industry, in order to better understand the history of any given accident.

EXECUTIVE PROBLEMS IMPORTANT

This relationship should be followed by standard medical specifications and requirements for employment without which no industry can operate efficiently and economically and without which the labor so worthy of its hire, cannot be properly distributed to best protect human economies. These are executive problems of the surgeon in industries, but they are factors of vital interest and importance. With the knowledge gained through such contact the history obtained subsequent to an accident is not only understood by the surgeon, but gives him a definite mental picture of the possibilities of a crushing, tearing, pulling or twisting force, as the case may be, and with experience and judgment he is enabled to anticipate complications and conditions which might arise from such a force.

A man rolled beneath a locomotive is quite certain to have multiple injuries, whereas a man struck in the head by a flying missile, is quite certain to have his injury localized.

How can the surgeon without the broad experience of general surgery cope with situations presented in the first case cited? The injury may be to the spine and spinal cord; it may be to the abdominal viscera, or it may be to the brain, and only in some cases are these conditions definitely determined after some operative procedure has been instituted and there is no time to call consultation and less time to lose in uncertainty. These, of course, are not the daily average experiences in the traumatic field, but there is no branch or division of the practice of medicine, which is more un-

certain and which has less of routine in the time or place of the event than in the field of traumatic surgery.

In the treatment of fractures alone no one procedure can be applied to all fractures. We are prone to fall into the general use of some method and fail to avail ourselves of the results of past experiences. Certain forms of treatment are obviously precluded under certain conditions.

THE END RESULT

The surgeon has still another and important function to perform, namely, that of disposition of the end results of his work in a manner wholly satisfactory to the injured person or at least wholly justifiable from the standpoint of the character of the injury sustained and the final result secured. This is in no sense a light task. The surgeon who has a thorough knowledge of all the facts surrounding the accident, has given such skill as he is endowed with in securing a result and who has given full weight to the end result secured, should have no difficulty in arriving at an

unbiased opinion as to any degree of permanent partial disability or permanent total disability and with such a picture to present he should have little or no difficulty in arriving at an amicable disposition of any given case or in final disposition before the industrial commission.

CONCLUSION

In conclusion I wish to say that the field of surgery in the industries in this country today is but in its infancy. Industries will have to be educated to the necessities and economies of organized systematized and standardized medical service. Ultimately all industries will have a full appreciation of the merits of such an undertaking and look far enough into the future to realize the true value of close contact between executives and medical service, not primarily from a standpoint of diminished expenditures, but more particularly from the viewpoint of increased efficiency, less loss of man hours, greater production and most effective of all a satisfied working personnel.

Dr. Warfield Writes of Goiter Conditions in Vienna; Dr. Edward T. Evans Visits British Isles

Vienna, May 1, 1925.

My dear Mr. Crownhart:

Spring has come to Vienna and has made the city look quite different from the winter garb it has had on since we arrived. The university has had a long holiday beginning before Easter (not affecting the courses for the American doctors) and lasting until May 4th. The next semester courses are posted on all the bulletin boards, so it will not be long now before the university is again in full swing.

The goiter question has interested me greatly and I shall pass on to my readers what I have seen here. The young adult population of Vienna shows (if one may estimate as one walks on the streets) as high a percentage of visible goiters as there is in the district of the Great Lakes Basin where we live, and yet strangely enough I have seen *very* few cases of what is called in the Mayo clinic terminology, toxic adenomata. I am at a loss to account for this very evident fact unless it be due to the profound difference in living conditions between the two peoples. Certainly the people here do not live under as high pressure as we do. Life, while undoubtedly hard, flows on

more quietly than with us. I have visited a number of large clinics of 100 to 120 beds each. In some I have visited daily, in others several times at intervals, in still others only once. I have been struck by the absence of symptomatic goiters. One sees adenomata, to be sure, large irregular goiters, but they are incidental findings in the course of other diseases. I have seen only a few exophthalmic goiter cases in young people on the Medical Services. I learn that these diffuse hyperplasias in young people are treated in different ways in different clinics. Some are treated by x-rays, some only by rest and by hydrotherapy. Some are given electrical treatments (for psychic effect), others are given quinidine or quinine together with rest and diet. (I might remark parenthetically that I have not been at all impressed by the treatment of cases here.)

Practically all the clinicians limit the protein of the diet because of its specific dynamic action on metabolism. If the case does not do well in a few weeks it is operated upon, a subtotal thyroidectomy. Ligation of the superior thyroid arteries is not infrequently done in severe cases of Basedow's disease. The Austrians

do not classify the cases as some men in America have done. They speak of Basedow's disease, acute and chronic, mild and severe cases which correspond somewhat to the so-called toxic adenomata, as *Struma Basedowica*. There seems to be a tendency to regard it as true hyperthyroidism. Chvostek, however, emphasizes the constitutional nervous factor in the cases.

The colloid in the gland is not considered to be a secretion containing the active substance, but to be an excretory product, a degenerative product. The colloid stores iodine, not however as the active principle of the gland.

I have seen several people with nervousness, tremor, tachycardia, loss of weight, etc., symptoms which were said to have resulted from the administration of iodine, even in a small dose. This is called here "iodine Basedow." It is said to be frequent. As an instance of different viewpoints I can relate briefly remarks I heard at a meeting of the Vienna Medical Society. Falta reported upon the remarkable results obtained by him in several cases of Basedow's disease with small doses of iodine in the form of Lugol's solution. He had barely finished his clinical report when several men jumped to their feet. H. Schlesinger did not agree at all; warned against iodine, said he had seen a number of cases of iodine Basedow. Baur stood on the fence. He thought in certain cases one might try it carefully. Von Eiselsberg agreed with Schlesinger. Wenckeback had seen some of the cases in America which had been treated with iodine. He was willing to admit that some cases which he saw seemed to be better than the history stated they had been. He was cautious, as he had had several "iodine Basedow" cases. He did not think there was the same type of case in Vienna as he had seen in the middle United States.

Aschoff has written a letter in one of the German journals describing his recent American trip. He says that he has never seen at autopsy gross or microscopic pictures of the thyroid gland like those he was shown in America. He did not attempt to explain the fact.

Although general medical treatment does not impress me here, one form of treatment is used in several clinics which does seem to me to be most important and yet by us most neglected. This is electro-, mechano-, and hydrotherapy. We have looked askance at and more or less pooh-poohed

all these forms of treatment. We have been so dominated by a worn-out pharmacopeia with its hundreds of useless drugs, that we have let the quacks and charlatans take over means of treatment which we should have kept in our own hands. The First Medical Clinic (Prof. Wenckeback) has a complete equipment in charge of a "Docent." While in Budapest recently I visited Prof. Koranyi's clinic and saw there also a complete electro-, mechano-, and hydrotherapeutic plant also in charge of a "Docent," who was also in charge of all the special diets in the hospital. This doctor told me that there were no quack institutes for electrotherapy in Hungary. This form of treatment is recognized as being of such importance that it has always been in the Medical Clinics. The effects of different forms of electricity are studied and tabulated as would be done in any other method of treatment, consequently there is data which enables the doctor to know what is best for any case which seems suitable for treatment by electricity. Diathermy is used a great deal for certain conditions. At the Woman's Clinic in Budapest remarkable success has been obtained in the treatment of gonorrheal cervicitis.

The treatment of certain open ulcers, skin lesions, large suppurating wounds and intestinal fistulae is done here in Vienna in some services of the Allgemeine Krankenhaus in large continuous baths. In the Eiselsberg Clinic there is a separate one-story building equipped for this treatment exclusively. On both sides of a central passageway are six rooms, one side for men and the other side for women, every room having two large rectangular, zinc-lined tubs. The patient lies on a frame which is raised or lowered by mechanical device. Patients remain in these tubs, through which water of any given temperature is constantly flowing, day and night. Once in twenty-four hours a patient is taken out and the tub is cleaned. Urine and feces are passed into the water. Sounds rather messy, I'll admit, but the results are certainly remarkable. It is also of interest that in spite of the bacterial pollution of the water by intestinal contents, secondary infection never has occurred in open wounds.

I expect to take a trip into Germany this month and visit several clinics in the smaller cities. My next letter, therefore, will probably be a series of impressions gained from several places.

Sincerely yours, LOUIS M. WARFIELD.

DR. EVANS VISITS ENGLISH HOSPITALS

"Glasgow, April 21, 1925.

" * * * Well, here we are in Glasgow. We are on the last leg of our journey. I wouldn't have missed our trip from London here for anything. On the way to Liverpool we stopped off at Oxford,—what a beautiful old school it is! We walked through yards and then entered Christ Church College and the Cathedral. There is something majestic about the Norman and Old English styles of architecture that "gets" one even more than the European or Continental churches. We also visited the Divinity School with its wonderful ceiling and the University Court Rooms.

"Then the ride on to Liverpool was beautiful,—everything in its spring green; the sheep pastured all along the way and the orchards all in bloom with villages immaculately neat, dotted over the landscape. Liverpool was 'awful.' That's about all one can say of it. We were there Sunday and Monday. Sunday was Primrose Day with primroses everywhere, but they didn't brighten the aspect any, what with the soot, dirty streets and still dirtier people.

"Monday morning I called at the Northern Hospital and stayed there nearly all day with Mr. T. K. McMurrie, who is Sir Robert Jones' assistant. His work is excellent, done with the surety of long practice and simplified technique. While there he operated on eight cases:

"1. Resection of knee for t.b.; a pretty job with excision of the soft tissues and bursa, entire, before attacking the kneejoint,—a very important point he says. After care—as soon as skin is healed put knee in a Caliper-Thomas splint and made to walk as pressure with immobilization in the splint leads to best union.

"2. Reduction of old non-union fracture of lower one-third of tibia (bone). In this case six weeks immobility as fragments were held in apposition by fibula.

"3. Manipulation of old Potts' fracture to break up adhesions.

"4. Claw foot — subcutaneous tenotomy of planter fascia and subsequent transverse astragalo-cuboid arthrodesis to stabilize foot in new position. This case was previously operated upon some years ago (as he said 'in the days when we did tendon transplants') having had a transplantation of perineus longus. It should have had an arthrodesis at that time as the resultant pull

changed the articular facet and allowed excessive motion in the astragalo-cuboid joint.

"5. Adhesions of flat foot broken up.

"6. Osteotomy (with saw used subcutaneously for genu valgum) — subsequent treatment: Thomas splint as a fractured femur. Like Sir Robert Jones, Mr. McMurrie never uses plaster Paris.

"7. Same as Number 6.

"8. Adhesions in a flat foot.

"I didn't stay as long as I expected in Liverpool as I couldn't enthuse enough over the work and the surroundings. Their ideas are sound but their technique from the aseptic's standpoint is not good, from our viewpoint. In none of the operations did the nurses keep her aseptics and in two the surgeons did not. All O.K. I suppose if they get away with it but I don't want anyone to operate on me who holds my leg up by the toes with sterile gloves and then removes my knee-joint. But that is their way. Their anatomical technique appears to be beyond question. In all the operations the Esmarch tourniquet was used. In not a single one did the artery have to be tied. In fact, they sewed up before removing the tourniquet, so sure were they of their work.

"In London I visited Guy's Hospital. What an old place it is and yet how well adapted are those same buildings for modern surgical and medical methods. Guy's is built around a court yard with the surgical building at one end,—the oldest of the buildings, four stories high and containing ten wards of ten beds each and two accident wards. The medical building at one side also contains wards to accommodate some four hundred patients in all. This faces a new massage department and the court is closed by the infants' wards and the out-patients' buildings. It would be hard to imagine a much more compact arrangement, allowing for clear division of work. The wards were light and airy, with plenty of room for each bed and good nursing care, with one week's active admitting to a ward in every four weeks. The surgical amphitheatres are on the top floor and well lighted and supplied. The services are general with a few specialists on the staff, in orthopedics and genito-urinary surgery.

"The nursing is of a high standard, high school education being required and none graduate under twenty-four years of age so that if a girl finishes her work at a younger age, she must stay on before graduating."

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SERVICE AVAILABLE

There is listed the following definite services that are available to our readers—the members of the State Medical Society of Wisconsin. If you have a need not covered here address the Secretary, Mr. J. G. Crownhart, 558 Jefferson Street, Milwaukee. "Let George do it."

FOR THE MEMBER

1. Package Libraries are now available on Cancer, Schick Test, Vaccination, Periodical, Physical Examinations, Insulin, Fractures of Long Bone, Protein Treatment, Control of Communicable Diseases, Goiter, Digitalis, Pneumonia, Diseases of the Knee, Encephalitis, Asthma, Epilepsy, Meningitis and Scarlet Fever. Address Package Library Department, Extension Division, University of Wisconsin, Madison. Material on other subjects compiled upon request.

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3. Physicians' Exchange Column is open to all members without charge.

4. New Scientific Publications listed in the Book Review columns of this Journal are available for inspection by the members. They are in the Medical Library, University of Wisconsin, Madison. Place your order through your local library where possible or address Mr. Walter Smith, Librarian.

5. State Laws and departmental rulings can be secured through the Secretary's office.

6. Legal Advice upon questions pertaining to the practice of medicine will be given in so far as is possible. A complete statement of the question or facts must be forwarded.

7. Legislative Service. Upon request members may secure information upon any measure introduced in the 1925 Wisconsin Legislature.

FOR THE COUNTY SOCIETY

1. Program Material. Pursuant to authorization by the 1924 House of Delegates the Secretary is arranging to make program material available without cost. The following can now be secured:

A. Departmental Officers of the State Board of Health. Address Dr. C. A. Harper, State Health Officer, State Capitol, Madison, Wis.

B. Clinicians of the Wisconsin Anti-Tuberculosis Association when in vicinity. Address Clinic Dept., W. A. T. A., 558 Jefferson Street, Milwaukee.

C. Councilors and Officers of the State Society. Address the individual.

2. Annual Statements. Uniform annual statements can be had without cost. Address the Secretary, advising number desired.

EDITORIALS

REFERRED SYMPTOMS

FAILURE to appreciate the fact that disease, in one location of the body may give rise to symptoms referable to another part, has been the cause of many mistaken diagnoses and consequently ineffectual treatment.

Certain referred symptoms are more or less well recognized clinical facts; such as the pain at the epigastrium or umbilical regions in many intra-abdominal lesions; the pain in the testicle, of renal colic and pain in the right shoulder region, of biliary colic.

Other referred pains are not so well known, for example, the interplay of disease symptoms above and below the diaphragm as is shown in the abdominal symptomatology of angina pectoris, pneumonia or pleurisy, if unrecognized, may cause disastrous errors in diagnosis and treatment.

The opposite reference of pain from a pathologic abdominal organ to the thoracic cavity is more uncommon and less frequently considered as a probability.

The referred pain of gall bladder disease is usually transferred to some other intra-abdominal organ or to the shoulder region, but a recent series of 16 demonstrable gall bladder cases, in which the presenting complaint in 5 was "Heart Trouble," served as a reminder that such a reference takes place, perhaps, more frequently than is commonly supposed.

Babcock has mentioned this association of heart symptoms with gall bladder disease and their relief following operation for the gall stones. W. J. Mayo likewise mentions this sequence and found coronary sclerosis with diseased gall bladder in 24% of a series of 87 cases of heart disease that came to autopsy.

The effect upon the heart may be either by bacterial infection as in other focal infections; or by nervous influence, the automatic nervous system (Vagus and Sympathetic) having practically complete control of both the liver and its ducts, and the heart.

This sequence, or coincidence, emphasizes the limitations of the ultra-specialists and the necessity for the specialist being in the first place a generalist, if one may use the term. A competent study of heart symptoms calls for some knowledge

of the liver and the biliary tract, and vice versa.

The possibility of liver, gall bladder or duct disease should be borne in mind when investigating a case complaining of vague, indefinite heart symptoms and such an inquiry will find its most important phase in the Annesis which may give, to one familiar with the story of the gall bladder, most important findings; while many times the physical examination the X-ray and clinical laboratories will be of little benefit, and often give rise to confusion.

Many students, internes and practicing physicians look upon history writing as a bothersome detail and a waste of time; but the importance of the Annesis is nowhere greater than in gall bladder disease, as in many cases the diagnosis and treatment will have to be decided in the absence of positive clinical findings at the physical examination.—*F. G. C.*

THE PATIENT'S PSYCHOLOGY

MOST of the medical men who got their formal schooling a quarter of a century or more ago missed many of the subjects adapted not alone to make them better practitioners, but also to add greatly to the interest of the art. Among these subjects was psychology, much of the substance of which we were expected some day to learn by contact with persons; by experience and observation; and if particularly fortunate, through informal conversations with our "preceptors." Few of us so much as knew that knowledge of "human nature," "personality," "behaviorism," etc., might be acquired by any other means than "bumping the bumps of experience."

Dr. Powers' "Psychology of Industrial Surgery," printed elsewhere in this issue, has an interest for physicians far greater than its title indicates and we are taking this means further to draw your attention to it. Whether you are interested in industrial surgery or not, you will hardly fail, we think, to be interested in the author's exceedingly readable exposition of the patient's psychology as it manifests itself in other directions as well. In short, many of us will find in Dr. Powers' discussion, the rationale of much of our knowledge which has often been acquired subconsciously and still retains, therefore, the hazy

and ill defined shape that characterizes information and knowledge so acquired.—*H. E. D.*

THANK YOU, MINNESOTA

THE Minnesota State Medical Association recently held its 57th Annual Meeting in Minneapolis. Wisconsin was represented at this meeting by our Treasurer Emeritus, Dr. S. S. Hall, who now resides with his daughter at 159 Malcolm Ave., S. E., Minneapolis.

During the course of this meeting the secretary arose to read an account of the life of Dr. Hall and ending with a resolution to make Dr. Hall an Honorary Member of the Minnesota State Medical Society. While Dr. Hall was still wondering if he had heard correctly, the president put the motion and it was carried unanimously. Thus did Dr. Hall become the first such member to be elected from without the boundaries of the state.

To Dr. Hall we extend our sincere congratulations adding, however, a reminder that he belongs to us and we in Wisconsin expect to see him at our annual meetings for many a year to come.

To the members of the Minnesota State Medical Association we offer hearty greetings and this expression of appreciation for the honor they have bestowed upon an officer emeritus of the Wisconsin Society. We assure you, Minnesota, that never was an honor more worthily bestowed. And we in Wisconsin will not forget your kindness.

"IT'S A FINE MEDICINE"

Now that smallpox is recurrent in somewhat of the old virulent form common before the advent of vaccination, the following prescription and comment may be suggestive. It is from an old book from which the title page, the name of author and the date of publication are missing. It was written sometime after 1666 but probably not long after that date.

A DRAUGHT IN THE SMALLPOX

Take cochineal from a half a dram to 1 dram; boil it in alexiterial milk-water 4 ounces to 3; in the strained dissolve diascordium, from 1 scruple to 1 dram; diacodium 6 drams; oil of nutmeg 1 drop; mix. Author's comment: This blows up the fire a little, and at the same time restrains the spirits from spanking too vigorously; it's a fine medicine, if judiciously given. But quacks and nurses were best not venture upon it.

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OSGOOD-SCHLATTER'S DISEASE; A REPORT OF CASES*

BY K. L. PUESTOW, B.S., M.D.,
Madison.

In 1903 Osgood¹ described adolescent tibial tubercle disease other than fracture as occurring not infrequently. Schlatter² independently in the same year drew attention to the same condition. Since then tibial tubercle disease of the adolescent has borne their names most commonly, although such terms as "Rugby Knee," apophysitis, periostitis tuberositatis tibiae, epiphysitis tibiae, and lesions of the tibial tubercle occurring during adolescence, have been used to describe the same condition.

In the development of the upper epiphysis of the tibia, the tibial tubercle is included as a tongue-like process descending over the diaphysis. The epiphysis develops either from a single center of ossification or from two centers when one exists in the tibial tubercle. Ossification of the tibial tubercle as shown by X-Ray studies (Hodgson³) develops at about the tenth year in girls and from one to two years later in boys. Union with the shaft starts between the fourteenth and the fifteenth year and is complete by the eighteenth year. Consideration of these facts may explain why separation of the tibial tubercle most commonly occurs between the twelfth and the fourteenth years, for it is into the tibial tubercle that the patellar tendon transmitting the traction of the quadriceps femoris, is inserted. But "a part of the tendon fibers of the vastus lateralis and medialis runs also on each side of the patella to the ventral surface of the condyles of the tibia" (Bardeen⁴) forming the retinacula patellae mediale and laterale. Osgood has shown that these fibers are sufficiently strong to prevent displacement of the avulsed tibial tubercle. Therefore, when the incompletely ossified tibial tubercle is loosened or completely avulsed, these fibers suffice to transmit to the tibia that force which extends it without further injury to the tibial

*From the Department of Clinical Medicine of the University of Wisconsin.



FIGURE NO. I

tubercle. The pain incident to this condition causes enough disability to limit the activity of the quadriceps femoris so that no excessive strain is thrown upon these fibers. To be sure, however, there are cases in which the initial injury is sufficient to displace the tibial tubercle and even cause fracture into the knee joint itself.

As indicated above, this condition occurs after ossification of the tibial tubercle has started and before complete union with the shaft takes place, therefore being a condition occurring at puberty. It is most common in athletic boys and frequently its onset is noted after violent and sudden contraction of the quadriceps femoris during some athletic contest, although cases occur following direct trauma or even where no history of attributable cause is obtainable. Because it is usually mild and transient in nature most instances are not drawn to the attention of physicians. The apparent incidence is consequently much less than the actual.

Most of these cases are seen as ambulant patients complaining of pain, tenderness, weakness,

swelling and partial disability of the knee. This pain is especially aggravated by vigorous use of the affected lower extremity, but the symptoms may be severe enough to cause total disability. Examination reveals the tenderness to be most acute at the site of the tibial tubercle just distal to the patella where increased pain usually may be elicited by holding the leg flexed against effort by the patient to extend it. But the patient may even be unable to extend the leg when no resistance is offered. In the more troublesome cases, hydrarthrosis and tenderness about the entire knee joint may exist. Even quadriceps muscle spasm has been noted (Hodgson³) to maintain the knee ankylosed in extension until treated.

Before consideration of the radiographic findings in this condition it should be remembered that occasionally no tibial tubercle is demonstrable; that the tibial tubercle, when present, may appear dissociated from the shaft because of an interposing plate of cartilage; and that the tibial tubercle may appear dissociated from the rest of the epiphysis when a separate center of ossification exists in the tubercle. Pathologically the X-ray may show a gouged out, or "worm eaten" appearance of the tibial tubercle, besides avulsion fractures, displacements, and especially in old cases an hypertrophy of the tubercle. Frequently no difference can be made out between normal and pathologic conditions.

Case 1—B. B. Male, aged twelve, presented himself



FIGURE NO. II



FIGURE NO. III

on November 22, 1924, complaining of pain in front of right knee upon running, playing football, and going up stairs. This he had noticed only during the fall at the onset of the football season. Examination revealed tenderness and slight swelling at the site of the tibial tubercle and pain in the same region aggravated by contraction against resistance of the quadriceps femoris. His general physical examination was otherwise essentially negative, he being a robust, muscular, athletic boy.

The X-ray plates shown (Figs. 1 and 2) reveal what at first appears to be a separation of the tibial tubercle, but upon comparison of the two sides both appear the same and are not unlike normal cases.

Restricted exercise and criss-crossing adhesive strapping are giving him relief.

Case II—J. C. Male, aged 19, who since he was 13 has complained of pain in his left knee after strenuous exercise. Especially after playing tennis this pain has been so severe as to be incapacitating with associated swelling of the entire knee, evidently a hydrarthrosis. By resting and applying hot compresses the swelling would subside over night and he would have limited use of his leg the following day. A history of trauma at onset six years ago was very indefinite.

He was first seen November 29, 1924, when in addition to pain, tenderness and swelling about the tibial tubercle there was evident a marked hydrarthrosis. Then the joint itself was tender and sore. This undoubtedly was secondary to the tibial tubercle disease and may be explained as a compensatory action on the part of the knee to enforce rest. Moist heat and rest reduced the swelling this time after several days. He was able then to walk only short distances with criss-cross adhesive tape bandages extending from above to below the knee. He since has had little trouble so long

as he uses his knee very limitedly. A diagnosis of sub-acute traumatic arthritis, secondary to tibial tubercle disease, was made by Dr. F. Gaenslen.

The X-ray plates of both knees (Figs. 3 and 4) showed a gouged out, worm eaten appearance of both tibial tubercles. It is interesting here to note that, although the X-rays of both tibiae appeared the same, never had he symptoms in his right knee until after his attention was called to the fact that both X-ray pictures appeared similar.

Case III—Dr. C. P. B. Aged 29. When 14 years old (1910) injured his left knee sliding to a base in a baseball game. He immediately complained of pain and swelling of the joint, and was temporarily disabled. The knee was aspirated and an elastic bandage was applied. Recovery took place in about two weeks. Thereafter he had no further trouble except that now he notices some tenderness over the left tibial tubercle when he runs a great deal.

Examination now reveals a slight enlargement at the site of the left tibial tubercle as compared with the right.

X-ray plates (Fig. 5) taken in February, 1924, reveal an old ununited fracture of the left tibial tubercle. In a comparison of the two sides there also appears some hypertrophy on the left side.

Case IV—G. S. Male, aged 22. When 14 years of age and again when 15 fell on right knee striking it in the region of the tibial tubercle. Following the first injury he was completely disabled for a week. Following the second injury his knee swelled and was bandaged. This time he was not completely disabled. Since then he has noticed that his right knee in the region of the tibial tubercle has been unusually sensitive to bumps so that he has guarded it to prevent injury. No amount of exercise causes discomfort and he presents no other symptoms.

Examination reveals a small point of tenderness over right tibial tubercle where there is some enlargement.



FIGURE NO. IV



FIGURE NO. V

X-ray examination (Fig. 6) reveals an old fractured fragment from the tibial tubercle at the point of tenderness.

Attention was accidentally drawn to this condition while examining him for an injury sustained on February 14, 1925.

Of the cases presented herewith, the first is interesting because of its typical character clinically and because of the radiograms (Figs. 1 and 2) which are not unlike the normal. Both knees appeared the same although only one side produced symptoms. The second case is unusual in that the knee joint is secondarily involved and also because of the unusual duration of symptoms even beyond the period when fixation of the tubercle to the tibia normally takes place. Here, too, although both sides appeared definitely affected as shown by the X-ray (Figs. 3 and 4) until recently only one side caused noticeable symptoms. It is manifest then that the X-ray can only be used as an adjunct to a careful history and physical examination.

Case Four is included as an instance of fracture of the tibial tubercle for comparison with the other cases. It should be noted that here trauma alone causes symptoms and not excessive exercise as in the first three cases.

A satisfactory explanation as to why this condition occurs and only at puberty seems evident from an anatomical consideration of the parts as given heretofore. The traction of the quadriceps femoris is transmitted mainly to the tibial tubercle

through the patellar tendon. In the adolescent this tubercle is undeveloped and insecurely fastened to the tibial shaft separated from it by an interposing plate of cartilage (see X-ray Figs. I and II) so that any excessive strain upon this tubercle as might be caused by sudden exertion or violent contraction, especially of the well developed quadriceps of a young athlete might readily avulse the tibial tubercle or pry loose the epiphysis with its beak. That there usually is no relationship between this condition and a delayed rickets seems manifest also from the foregoing consideration, although a case reported by Mueller³ in which, in addition to a spontaneous separation of the epiphysis of the tibia there also existed a separation of the epiphysis of the lesser trochanter and a partial splitting of the tip of one patella indicates that occasionally general systemic conditions may have to be considered. Likewise, unless Perthes' disease of the hip can be explained by a similar mechanical consideration, it does not seem to be analogous to this condition despite the fact that both are self-limiting adolescent diseases characterized by pain, tenderness and temporary partial loss of function. However, is it not possible that the vague rheumatic "growing pains" of youth are not frequently mistaken for this condition especially in its milder manifestations?

Although one must rule out loose cartilages, periostitis, osteomyelitis, joint fringes, bone cysts, bone abscesses, patellar fractures, infectious and

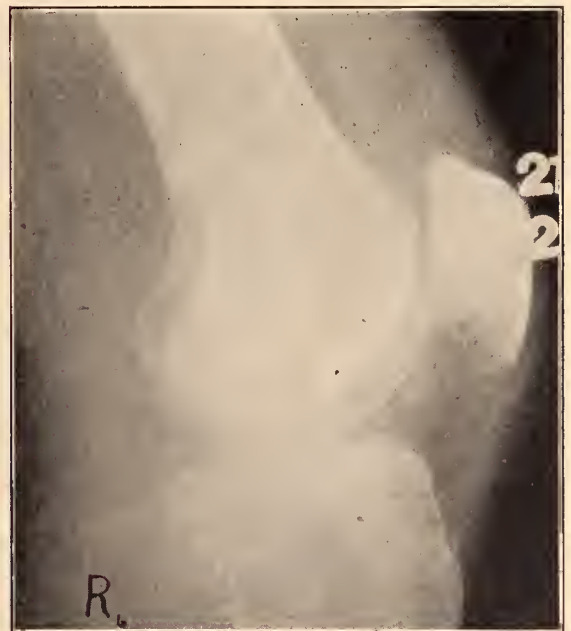


FIGURE NO. VI

traumatic arthritis, tuberculous and luetic conditions, a pretibial bursitis is probably the only condition which would cause difficulty in a differential diagnosis. Here one must distinguish between an inflammatory condition posterior to the patellar ligament and a lesion of the tibial tubercle situated distally adjacent to the bursa. The demonstration of fluid by fluctuation or puncture of the bursa would rule out tibial tubercle disease whereas the occurrence in an adolescent of pain, tenderness and partial loss of function with collaborating X-rays should be sufficient to differentiate tibial tubercle disease.

Usually the prognosis is good. Most cases will be relieved spontaneously with no other treatment than limited motion enforced by the pain incident to excessive activity. Other cases are relieved by criss-crossing adhesive strips anteriorly from above to below the knee, partially immobilizing the knee. If a strip of felt is included in this dressing so that greater pressure is made on the ligamentum patellae by placing the felt strip between the patella and tibial tubercle the discomfort may further be relieved. A posterior molded splint completely immobilizing the knee may also give relief. In the rarer and more severe cases in which there has been actual displacement or fracture of the tibial tubercle, operative procedures may be necessary. Trephining, pegging, suturing, or removal of the tibial tubercle, all have been used with ultimate good results in these cases.

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PREVENTIVE MEDICINE

Edited by

W. D. STOVALL, Chairman

Section on Preventive Medicine, State Medical Society of Wisconsin

This Section is open to all members of the State Medical Society and others who wish to discuss subjects pertaining to Public Health. Original articles, and criticisms of statements appearing in this section are earnestly solicited. Questions concerning public health procedure will be answered. Address communications to Dr. W. D. Stovall, State Laboratory of Hygiene, Madison, Wis.

DIAGNOSIS OF DIPHTHERIA

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

Director, State Laboratory of Hygiene,
Madison

The examination of cultures for the diagnosis of a case of diphtheria has an entirely different significance than the examination of cultures for release from quarantine.

Clinical pathology, clinical laboratory diagnosis, is part of clinical medicine, and like the clinician the clinical pathologist requires a history which gives the important diagnostic features of the case. Clinical laboratory diagnosis can not be done intelligently without clinical knowledge of the case.

This is no better illustrated than in the diagnosis of diphtheria cultures. One of the essential features of a laboratory diagnosis of diphtheria is that the result should be available to the physician early in the onset of the disease. This means that extremely difficult and tedious laboratory procedures which consume days and even weeks have no usefulness in the clinical laboratory. In order to meet this necessity various means have been devised for arriving at an opinion by short cuts. One of these short methods is the morphological identification of diphtheria bacilli in cultures for the diagnosis of diphtheria. It is well known that morphological diagnosis has many errors. Cultures from the throat and nose are rarely pure cultures. They nearly always show many cocci and bacilli. Some of these bacilli have an appearance very similar to diphtheria bacilli. In such cases the chances for a bacillus, which very closely resembles the diphtheria bacillus, being a true diphtheria bacillus depends very largely upon whether or not the culture comes from a patient or a healthy individual. In such cases the clinical pathologist has no way to

come to a definite laboratory diagnosis unless he has the clinical history of the case.

Not only the presence of other bacilli, but the character of the growth proves to be a confusing factor, and is another reason why a clinical history is of so much assistance to the clinical pathologist. In the State Laboratory of Hygiene we examine many cultures every day and of course are always on the lookout for better methods. Several years ago we began to notice what we thought was an interference with the growth of diphtheria bacilli by staphylococci. We immediately began a study of the influences on the morphology of the diphtheria bacillus when grown in mixed cultures.

The various classifications of diphtheria bacilli in the literature are based on the morphology and staining character of the organisms. The following quotation from our publication in 1923 illustrates the character of the work and the result.

"There is so much reference made to the differentiation of toxin from nontoxin producing types of diphtheria bacilli by morphology and staining characteristics, in spite of some of the literature to the contrary, that we determined to find if possible the effect on the morphology and the staining characteristic of *B. diphtheriae* of growth in mixed cultures. Our work indicates that there is a definite effect on the part of cultures of staphylococcus aureus for cultures of *B. diphtheriae*, and that staphylococci will completely eradicate diphtheria bacilli from the culture if present in large enough numbers. The effect does not seem to be confined entirely to a matter of overgrowth because when staphylococci are planted with cultures of *B. diphtheriae* in such amounts as to allow for an abundant growth of diphtheria bacilli the morphology and staining of the latter named organism is markedly changed. This change is so marked as to completely change the classification of the diphtheria bacilli when Westbrook's classification is used. This influence is so constant and so marked in some cases as to make it impossible to use Westbrook classification for routine diagnostic work.

Streptococci when grown in equal amounts with diphtheria bacilli seem to effect no change in its size, shape or staining characteristics.

Certain nonvirulent beaded bacilli which we have designated as type X when grown in a mixture with staphylococci have the identical morphology and staining characteristics of type B. of

Westbrook's types of *B. diphtheriae*, but when grown in pure culture is readily differentiated from *B. diphtheriae*.

The result of this work indicates that when diphtheria-like bacilli are found in throat cultures in which staphylococci are growing that it is necessary to isolate and study the morphology of the bacillus in pure culture even though it seems quite remote from *B. diphtheriae* in the throat culture.

The effect on the morphology of diphtheria bacilli by growth in mixed culture with staphylococci indicates that the variation of the staining characteristic of these organisms is not so much dependent upon the special staining method used as upon the influence on the morphology and staining reaction by growth in mixed culture. It appears to us that this change in morphology and staining reaction is due to some change in the composition and structure of the organisms; that some change in the physiology of the organisms has been brought about. If we are correct in this supposition then it is easy to explain why stains can not be relied upon to differentiate toxin from non-toxin producers. If changes have been brought about which interfere with granule formations then, of course, no stain will be able to stain granules. It is certain that in mixed cultures with staphylococci diphtheria bacilli will stain as solid bacilli while in pure culture they are distinctly beaded.

Our observations of the influence of staphylococci on the staining of avirulent beaded bacilli indicate that in this case the beading may be more pronounced; that is, the bacilli stain more solid, producing an effect which makes the organism more closely resemble what is usually accepted as good morphology for true diphtheria bacilli. The result is that even when the stain does bring out granules it can not be depended upon to differentiate toxin from nontoxin producers because of the influence of growth with staphylococci on the staining reaction of the bacilli."

It is quite evident from this work that in mixed cultures, such as all throat cultures are, the laboratory diagnosis can not always depend alone upon the distinctive staining and morphology of the diphtheria bacillus. Of course in typical cases, and the majority of the cultures from active cases of diphtheria show typical cultures, the bacilli are distinctive and the diagnosis is easy for the experienced person. In a good number of instances,

however, the laboratory diagnosis depends upon several factors, not alone a typical bacillus, and not the least of importance is the clinical history.

DIRECT SMEARS

In the last few months we have started a new method of diagnosing diphtheria. The method is not new, but it is new for this laboratory. For years it has been known that diphtheria bacilli can often be identified in smears of the membrane made on glass slides and stained with methylene blue. We have hesitated to begin such a method of diagnosis, knowing the difficulties involved. This method requires that the laboratory know the history. We have changed our outfits so that now each mailing case carries the usual culture tubes for cultures from the nose and throat, the sterile glass tube with the swabs, and in this tube there are three instead of two swabs, and a glass slide upon which to make a smear of the membrane. We ask that in addition to making the two cultures that a piece of the membrane be removed and smeared over the surface of the slide. The membrane should be mashed out over the slide so that it does not appear in thick masses. This is another short cut to a quick diagnosis. The value of all such methods depends upon the interpretation put upon it. If such a method is used without cultures to confirm the diagnosis, it can not be justified because it is open to many errors. If negative reports are made from such preparations and accepted by the physician as a final diagnosis, they can not be justified. They are an important means for diagnosing diphtheria if it is understood that they simply offer a quick means of identifying organisms which look like diphtheria bacilli and which if found in the throat of a person who is suffering from a sore throat with or without a membrane afford a means of diagnosis.

So far I have said nothing about the diagnosis of diphtheria in the release cases. It is obvious from what has been said that the microscopic diagnosis of diphtheria is done by a method which is the result of the urgency for a quick result and its accuracy depends upon several factors:

First, whether or not the culture comes from the throat and if so whether or not the patient shows evidence of diphtheria.

Second, the staining character and morphology of the bacillus.

Third, the kind of organism which grows in the culture with the diphtheria bacilli.

RELEASE CULTURES

When we come to the identification of diphtheria bacilli in cultures from cases who are recovering from diphtheria or from healthy carriers, we have an entirely new set of circumstances which govern the decision. In the one case the continued presence of virulent diphtheria bacilli prolongs the period of quarantine, which we desire to make as short as possible, and in the other quarantines a person who has not been sick and is not sick at the time.

During 1920 and part of 1921, in order to determine a routine procedure for the State Laboratory of Hygiene, we studied fifty-one cultures which we had isolated from throat cultures which had been diagnosed diphtheria from the morphology. Of these cultures ten (10) had been isolated from cultures secured from people who were sick with clinical diphtheria, twenty-six (26) from convalescent carriers, and fifteen (15) from healthy carriers. Every culture isolated from those who were sick or who were recovering from the disease gave a positive virulence test, indicating that from all of these cases the organisms were true toxin producing organisms. The test carried out with convalescent carriers indicated that as long as diphtheria bacilli appeared in the cultures, the organisms were virulent. Of the fifteen cultures isolated from the throats of people who gave no history of being sick but were picked up in the process of culturing groups in a search for a carrier, thirteen gave a negative virulence test, indicating that they were not true toxin producers, and therefore the people carrying these organisms did not require quarantine.

From this study and others the importance of the laboratory diagnostician knowing whether the culture comes from a sick person, a convalescent carrier or healthy carrier is apparent. The conclusion is that bacilli, having the morphology of diphtheria in throat cultures collected from people who are manifesting signs of clinical diphtheria or those who have recently recovered are practically always true toxin producing or virulent organisms, while organisms isolated from healthy carriers are in the vast majority of the cases non-virulent.

It is also apparent that the tests any culture is carried through depends upon the clinical history. A culture which comes from a healthy carrier, if it shows diphtheria-like bacilli, is immediately started through for a virulence test, and pending

the outcome of this test the diagnosis is reported as positive to diphtheria. If the clinical history is not known, we presume that the culture is for diagnosis and no virulence test is done. If the virulence test is not done and the culture is from a healthy carrier then the quarantine may be unnecessary.

UNCERTAIN RESULTS

In spite of all of these modifying influences which are taken into consideration in determining the microscopic diagnosis of diphtheria, it sometimes happens that the diagnostician is not able to say with certainty, in which case his opinion may be suspicious of diphtheria. Such a diagnosis is an admission of an inability to make a certain diagnosis, and has the advantage of indicating that a second culture probably will show diphtheria bacilli. It simply expresses a doubt. In addition to this it happens once in a while that the culture is so overgrown with a spore forming organism that it is unsatisfactory for an examination for diphtheria bacilli. In such cases the diagnosis of contamination is made. Once in a while no growth whatever takes place and it is so reported. This, of course, can not be interpreted to mean a negative diagnosis to diphtheria, but that the culture was unsatisfactory.

SUMMARY

1. The diagnosis of diphtheria in the laboratory, like any other diagnosis in the laboratory, is based not alone upon the microscopic finding but also upon a knowledge of the clinical history.

2. The treatment accorded any culture showing diphtheria bacilli is modified according to the clinical state of the person from whom it is collected. In the case of healthy carriers an immediate virulence test is done. In cases of sick people or convalescent carriers no virulence test is required for at least two months.

3. A culture from a suspected case of diphtheria requires much prompter action and therefore morphological diagnosis in direct smears is relied upon and the diagnosis confirmed by culture. If a diagnosis can be made from the smear, the report is obtained twenty-four hours earlier than if a delay for incubation of the culture is necessary.

4. The diagnosis is materially influenced by the type of organism found in the culture with the diphtheria bacilli. The presence of staphylococcus tends to exclude the growth of diphtheria bacilli if present in large enough numbers, and to

modify its typical morphology if it does not crowd it out altogether.

5. The results of the examination are indicated as positive when the culture shows diphtheria bacilli, negative if none are found, contaminated and no growth if the culture is unsatisfactory.

PUBLIC HEALTH NOTES

FROM THE
STATE BOARD OF HEALTH

There is no legal restriction that would require a city to obtain the consent of town authorities in order to locate an isolation hospital in an adjoining town, outside the city limits. Properly conducted, an isolation hospital is held by the courts not to be a menace to public health and cannot be closed or ordered removed as a nuisance. The modern practice is to establish the isolation hospital at a central place so that people will be encouraged to use it for the care of all dangerous communicable diseases.

Upon the expiration of the 14-day exclusion order for smallpox, it is not necessary for a local board to obtain the consent of the state board of health to renew the order for a longer period, provided several days have elapsed since the expiration of the first order. In other words, if new cases of smallpox do not develop, the local board is authorized to issue an exclusion order for another 14 days, which order has the same effect as the original one. If it is desired to make the exclusion continuous for a period of 28 days from the time the first order was issued, the consent of the state board is necessary.

In passing upon applications for extension of cemetery limits, the State Board of Health cannot consider the question of damages or the effect upon real estate values in the vicinity. These matters are covered by the statutes, giving property owners right of action for damages if aggrieved.

It was advised that it is practically impossible to isolate tuberculosis in milk unless the organisms are present in especially large numbers. In the case of a herd suspected of having bovine tuberculosis, the owner should write the state veterinarian at once and arrange to have the herd tested.

THE STATE MEDICAL SOCIETY OF WISCONSIN

ORGANIZED 1841

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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

BARRON-POLK-WASHBURN-SAWYER-BURNETT

The June meeting of the B-P-W-S-B Counties Medical Society was held at Spooner on the 2nd of the month. Dr. L. E. Daugherty, St. Paul, Minn., spoke on "Extra Pleural Thoracoplasty;" Dr. F. J. Plondke, St. Paul, Minn., on "Intestinal Obstruction;" Dr. R. E. Mitchell, Eau Claire, on "Obstetrics;" Dr. G. A. Larson, Hayward, on "Physiotherapy;" Dr. E. J. Knapp, Rice Lake, and Dr. W. B. Cornwall, Amery, also spoke at the meeting.

BROWN-KEWAUNEE

Dr. C. W. Hopkins, Chicago, chief surgeon of the Chicago & Northwestern Railroad, spoke at the May meeting of the Brown-Kewaunee County Medical Society held at the Beaumont Hotel, Green Bay, on May 5th. "Traumatic and Reconstruction Surgery" was the topic presented and was illustrated by lantern slides.

The Green Bay Academy of Medicine invited the county society to attend its annual meeting at Hotel Northland on May 13th. Dr. Herman Kretschmer, Chicago, read a paper on "Hematuria" illustrated by lantern slides. Following this, a four-reel moving picture on "Pulmonary Tuberculosis" was shown. This film had been prepared under the direction of Dr. Gregory Cole, New York City, and shows the progress of the disease very graphically.

CRAWFORD

The Crawford County Medical Society held a meeting at Prairie du Chien on Thursday evening, May 21st. The following program was presented: "The General Practitioner," by Dr. Edward Evans, La Crosse; "Some Points in Diagnosis of Pulmonary Tuberculosis," by Dr. A. A. Pleyte, Milwaukee; "Scarlet Fever Biologicals," by Dr. W. H. Guilford, State Board of Health, Madison; "Medical Legislation," by Dr. A. J. McDowell, Soldiers Grove.

DANE

Members of the Dane County Medical Society met on May 20th at Turner Hall, Madison. Dr. A. S. Loevenhart presented a paper on "Studies in Local Anaesthetics." Following a short business meeting the doctors enjoyed a musical entertainment.

DOUGLAS

The members of the Douglas County Medical Society met at Hotel Andray, Superior, on June 3rd. A paper was presented on "Scarlet Fever."

EAU CLAIRE AND ASSOCIATED COUNTIES

The monthly meeting of the Eau Claire & Associated Counties Medical Society was held at the Eau Claire Hotel on April 27th. Features of this meeting were the addresses by Dr. Frederick E. B. Foley of the Miller

Clinic, St. Paul, who presented a treatise on "Embryology of the Upper Urinary Tract Anomalies" illustrated with lantern slides from clinical cases, and Dr. Robert Allison, a professor at the University of Minnesota, gave a paper on "Bone Pathology."

GRANT

The Grant County Medical Society was host to the members of the Crawford, Lafayette, Iowa and Dubuque (Iowa) County Medical Societies for a joint meeting held at Lancaster on Tuesday, May 12th. The meeting convened at 3:00 p. m. at the Grantland Club Rooms and adjournment was taken to the local theater for the scientific program.

The scientific program follows: "Benign Tumors of the Intestinal Tract," Dr. James Dean, Madison; "Physical Diagnosis of Pulmonary Tuberculosis," illustrated with lantern slides, Dr. Wm. S. Middleton, University of Wisconsin, Madison; "Surgical Aspect of Pulmonary Tuberculosis," Dr. John L. Yates, Milwaukee; and moving pictures of some of our famous surgical clinics presented by H. G. Fischer & Company. At 6:30 some seventy members were entertained at a banquet at the Grantland Club rooms. Following suggestion by Dr. Wilson Cunningham, councilor of the Fourth District and president of the State Society, it was resolved that a formal organization be constituted for the Fourth Councilor District. This organization will be perfected by the presidents and secretaries of the county societies included in the district, which are: Crawford, President Dr. W. W. Coon, Gays Mills and Secretary Dr. T. E. Farrell, Seneca; Grant, President Dr. F. E. Blackburn, Cassville and Secretary Dr. M. B. Glasier, Bloomington; Iowa, President, Dr. D. B. Hamilton, Ridgeway and Secretary Dr. M. W. Trentzsch, Highland; Lafayette, President Dr. H. B. Moe, Blanchardville and Secretary, Dr. P. W. Leitzell, Benton; Richland, President Dr. H. C. McCarthy, Richland Center and Secretary Dr. G. Benson, Richland Center.

Mr. J. G. Crownhart, secretary of the State Society, gave a short report on the present status of legislation affecting the practice of medicine, following which members from all parts of the district were called upon for stories. Formal adjournment was taken at 9:00 with the members voting the meeting to be the best ever held in the Fourth District.

JEFFERSON

The members of the Jefferson County Medical Society met at Watertown on April 9th. The following program was presented: "Psychoses Following Head Trauma" by Dr. A. W. Rogers, Oconomowoc; "Symposium on Gastric and Duodenal Ulcers," by Drs. H. E. Marsh, J. N. Sisk, and R. H. Jackson, from the Jackson Clinic, Madison.

The May meeting of the Society was held at Fort Atkinson. Dr. C. R. Bardeen, Madison, gave a paper on "Medical Education" and Dr. E. E. Neff, also of Madison, spoke on "The Relationship That Exists Between General Diseases and Those of the Eye."

KENOSHA-RACINE-WALWORTH

Members of the Racine and Walworth County Societies were guests of the Kenosha County Medical Society for a banquet meeting at the Elks Club, Kenosha, Friday evening, May eighth. Following the banquet the meeting was devoted to a discussion on medical organization and methods for its improvement and socio-medical subjects.

Dr. L. E. Fazen, Racine, spoke on the subject of "Industrial Medicine;" Dr. F. B. Lansdowne, Kenosha, on "Compulsory Health Insurance;" Dr. W. P. Collins, Racine, on "Socialized Medicine;" Dr. T. J. Toner, Kenosha, on "Socialized Medicine in the Ranks of the Medical Profession;" Dr. J. F. Hastings, Kenosha, on "State Medicine;" Dr. W. W. Bauer, Racine, "Problems of the Health Officer;" Mr. J. G. Crownhart, Secretary of the State Society, "Present Problems of the State Medical Society," and District Attorney Powell, Kenosha, pledged the efforts of his department to abolish illegal practitioners of medicine in a talk on that subject.

Following the talks the meeting was thrown open for a general discussion. Problems of medical organization were discussed and it was voted that the societies take up these problems individually for consideration. Over seventy members attended the meeting. Interest in the general questions presented during the evening was augmented by the following questionnaire which was given to each member at the table:

QUESTIONNAIRE

1. How many County Medical Society Meetings have you attended this year?
2. Why should interest and attendance at our National State and County Medical Meetings become less?
3. Why are nearly all County Medical Societies in need of a Pulmotor or some other emergency method of rejuvenation?
4. Why have a medical organization of any kind if it fails to appreciate and protect our individual rights and privileges?
5. Why should Pseudo-Charity, Socialized Medicine, Illegal Practitioners and Advertisers of every sort, State Medicine, and Compulsory Health Insurance be countenanced by our profession?
6. Why permit a patient to call other physicians during your attendance without first consulting you?
7. Were you ever called to see an emergency, sick, or injured patient when you could not find a parking space near, because of so many cars belonging to M. D.'s?
8. Many sane progressive physicians believe that these things can and should be remedied.

MILWAUKEE

Dr. William Allen Pusey, president of the American Medical Association, Chicago, was the guest of the Milwaukee County Medical Society at its last meeting of the season, May 8th. Doctor Pusey spoke on "The Social and Economic Status of the Physician." The society also acted as host to its past presidents who had been extended a special invitation in recognition of their services to the society.

OUTAGAMIE

The regular monthly meeting of the Outagamie County Medical Society was held on March 17th. Dr. Isaac Abt of Chicago held a pediatric clinic at St. Elizabeth Hospital. About twenty-five cases were presented for diagnosis and treatment. Following a dinner at Hotel Conway, Doctor Abt read a paper on "Foot Injuries."

At the April meeting of the society Dr. O. H. Foerster, Milwaukee, held a dermatological clinic at St. Elizabeth Hospital. Following a dinner at Hotel Northern, Doctor Foerster presented a series of lantern slides showing the different skin lesions.

RACINE

The regular monthly meeting of the Racine County Medical Society was held in the classroom at St. Mary's Hospital, Racine. Dr. Francis D. Murphy, medical director of the Milwaukee County Hospital, gave an address on the subject of "Diagnosis and Treatment of Nephritis." The lecture was illustrated with stereopticon slides.

ROCK

The Rock County Medical Society met on April 28th at Beloit and after a banquet at the Oriental Cafe adjourned to the Elks' Club where a program was given. Dr. Ira R. Sisk, Madison, spoke on "Surgery of the Kidney." The next meeting of the society will be held at Janesville.

TREMPEALEAU-JACKSON-BUFFALO

The Trempealeau-Jackson-Buffalo County Medical Society met at Independence, Friday, May 22nd. Dr. R. C. Buerki, superintendent of the State of Wisconsin General Hospital, spoke of the work that the State Hospital is trying to do and which should be of interest to every medical man in the state. Dr. W. E. Middleton of the Wisconsin University Medical School discussed "The Diagnosis and Treatment of Acute Diseases of the Respiratory Tract." The meeting was splendid; thanks to Dr. Buerki and Dr. Middleton.

WINNEBAGO

At the April meeting of the Winnebago County Medical Society Dr. A. L. Dealy of the Oshkosh State Normal School spoke on the "Correction of the Abnormal Child." Mr. E. J. Dempsey, university regent, spoke on "Educational Finance."

NINTH COUNCILOR DISTRICT

The annual meeting of the Ninth Councilor District Medical Society was held at Stevens Point on the evening of May 13th. The society met at Hotel Whiting where dinner was served at six-thirty. Following the dinner, the annual election of officers ensued after which a program on obstetrical practice was given: "Prenatal Care," by Dr. S. M. B. Smith, Wausau; "Drugs Useful in Obstetrical Practice," by Dr. Carl von Neupert, Stevens Point; "Anesthesia During Labor," by Dr. H. A. Vedder, Marshfield; "Minor Obstetrical Operations," by Dr. D. Waters, Wisconsin Rapids; "Causes of Infant Morbidity and Mortality," by Dr. A. N. Christofferson, Waupaca; "External Version," by Dr. J. B. Vedder, Marshfield; "After-Care of Mother and Child,"

by Dr. D. T. Jones, Wausau; and Mr. McHugh of the Narcotic Division, Revenue Department, gave a talk on the Harrison Law.

The new officers elected for the ensuing year are: Dr. H. H. Milbee, Marshfield, president; Dr. W. E. Zilisch, Wausau, vice-president; and Dr. J. F. Smith, Wausau, secretary-treasurer.

OPHTHALMOLOGICAL AND OTO-LARYNGOLOGICAL

The spring meeting of the Central Wisconsin Ophthalmological and Oto-Laryngological Society was held at Eau Claire on May 19th. The afternoon session opened at Sacred Heart Hospital. Dr. Robert Sonnenschein, Chicago, held a clinic on "Functional Testing of the Hearing;" with demonstration on patients; the "Vestibular Reaction," with demonstration and lantern slides; and also demonstrated "Block Anaesthesia in Tonsillectomy." Dr. Joseph Baird, Eau Claire, gave a talk with demonstration on the "X-ray Diagnosis of the Nasal Accessory and Mastoid."

The society met with the Eau Claire and Associated Counties Society at the evening session. Doctor Sonnenschein, Chicago, gave a paper on "Headache, with references to the Nose and Nasal Accessory Sinuses;" Dr. Grant, St. Paul, "Muscles and Muscle Tucking;" and Dr. Aesterlin, pathologist, Eau Claire, "Autovirus."

GREEN BAY ACADEMY OF MEDICINE

The first annual meeting of the Green Bay Academy of Medicine was held at that city on May 13th. About one hundred and twenty-five physicians and surgeons gathered at Hotel Northland for the business session at 5:30 which was followed by a banquet at 6:30.

Dr. A. J. McCarey, president of the Academy, introduced the speaker of the evening, Dr. Herman Kretschmer, Chicago, who is president of the American Urological Society. Doctor Kretschmer's topic was "Hematuria," illustrated by lantern slides. Four reels of motion pictures were shown demonstrating the progress of pulmonary tuberculosis. Starting with diagrams, the pictures culminated in a composite view made from x-ray plates showing the progress and ravages of the disease. Dr. Ralph M. Carter was chosen president of the organization; Dr. I. T. Levitas, vice-president; and Dr. E. G. Nadeau, secretary-treasurer.

MILWAUKEE ACADEMY OF MEDICINE

The Milwaukee Academy of Medicine held a joint meeting with the Dental Forum on May 12th at the Health Service Building. Dr. T. L. Squire presented a paper on "Focal Infection." A discussion of dental aspect was opened by Drs. J. J. Wright and E. C. Wetzell and a discussion of medical aspect by Dr. T. L. Szlapka.

On Tuesday, May 26th, the members of the Milwaukee Academy of Medicine met at the Health Service Building. Dr. M. N. Federspiel presented a paper on "Some Malformations of the Maxilla Necessitating Surgical Orthodontic and Prosthetic Care," illustrated by lantern slides. Dr. John P. Koehler, Milwaukee Commissioner of Health, spoke on "Cause, Incidence, and Control of Present Smallpox Epidemic."

MILWAUKEE OTO-OPHTHALMIC SOCIETY

A joint meeting was held of the Milwaukee Oto-Ophthalmic Society and the Milwaukee Neuro Psychiatric Society on May 19th at the University Club. Dinner was served at 6:30 after which the program followed. Dr. Sylvester Stack, Jr., spoke on "Two Cases of Brain Tumor;" Dr. J. Mulsow on "An Unusual Case of Multiple Brain Tumor;" Dr. T. F. McCormick on "Disorders of the Hypophysis with Special Reference to Eye Findings," and Dr. B. B. Rowley on "Ocular Manifestations of Multiple Sclerosis."

NEWS ITEMS AND PERSONALS

Dr. R. H. Bitter, Oshkosh, was elected president for 1925-1926 at the annual meeting of the staffs of Mercy and St. Mary's Hospitals at Oshkosh. Dr. W. A. Wagner was elected secretary and Dr. W. P. Wheeler, vice-president.

A trust fund of \$5,000 from the estate of the late Mrs. Cora Rodermond Evans, Madison, has recently been given the University of Wisconsin by her will, to be known as the "Cora Rodermond Evans Loan Fund for Medical Students." The fund is to be held in trust by the Regents and the income loaned to needy students.

Dr. G. R. Egeland, Sturgeon Bay, recently announced the closing of his hospital. He plans to convert the building and premises into a Health Home for convalescents, which will be in charge of Mrs. Egeland. After June 15th Doctor Egeland will resume his general practice of medicine and surgery with offices in the Merchants Exchange Bank Building. He will move part of the hospital operating equipment there for use in minor cases and for emergencies only.

Dr. F. A. Southwick, Stevens Point, who recently returned to that city from California, has resumed his work as city health officer. During his absence from Stevens Point Dr. W. W. Gregory was acting health officer.

At a meeting of staff doctors at the Madison General Hospital, Dr. Walter H. Sheldon was elected president; Dr. Eugene E. Neff, vice president, and Eugene S. Sullivan was named secretary.

Dr. George N. Pratt, in company with his partner, Dr. Christian Ketels of Appleton, and Dr. H. A. Briggs, have established a clinic in the city of Neenah. The clinic is located on the second floor of the Weinke Building and x-ray and chemical laboratories and other equipment has been provided. Doctor Briggs will be located in Neenah all of the time and will be in charge of the Neenah office while Doctor Pratt and Doctor Ketels will continue to maintain their Appleton offices with several hours a day spent at the Neenah clinic.

Dr. W. F. Lorenz, Madison, was elected president of the staff of St. Mary's Hospital at the annual staff meeting May 7th. Dr. J. T. Donovan was chosen vice-president and Dr. R. C. Aylward, secretary-treasurer. Sub-committees were appointed, and outlines and plans

were made for an increase in the resident staff to meet requirements made necessary by the enlargement of the hospital. When the addition is completed, St. Mary's will accommodate nearly 200 patients.

Mr. David V. Jennings, chief examiner of the county civil service commission, stated recently that none of the 25 doctors who took the examination for head of the Milwaukee County Dispensary qualified for the position. Each of them lacked sufficient experience in dispensary work. The examination was conducted by a special board consisting of Drs. L. F. Jermain, F. J. Gaenslen and J. L. Yates. Another examination will be held. The position is vacant because of the resignation of Dr. John P. Koehler to become health officer of the city of Milwaukee.

Dr. Smiley Blanton, formerly of Madison and now head of the Child Guidance and Speech Department of the University of Minnesota, conducted a free speech clinic at Waukesha on May 16th.

At the annual meeting of the American Dermatological Association held at Washington, D. C., May 5th and 6th, Dr. Andrew Biddle, Detroit, was elected president, Dr. O. H. Forster, Milwaukee, vice-president, and Dr. C. Guy Lane, Boston, secretary.

Dr. C. C. DelMarcelle of Neenah sustained serious injuries in an automobile accident on May 15th while responding to a hurry call. He submitted to an operation at Mercy Hospital, Oshkosh, that same evening and it was reported that he had a fighting chance to live despite his broken back.

"Dr." H. Fleischer, Clintonville, was found guilty of second degree manslaughter on May 15th in the Wau-paca circuit court. He was charged with performing an illegal operation, after which the young woman died.

Dr. E. F. Tierney, formerly of Portage, has now located at Baraboo. After serving for a year and a half as a resident physician in the Denver City and County Hospital, he came to Portage where he has been associated with Drs. Henney and Snyder for the past two years.

Ripon has been selected for a University of Wisconsin Medical Extension Clinic. Dr. Orville O'Neal, Dr. J. S. Foat and Dr. J. M. Johnson, with several other physicians, met a representative of the University Extension Division at Berlin recently to select a course for the Green Lake County Medical Society.

Fifteen doctors residing in various parts of the country are being considered by the advisory committee which was named by the Madison Board of Health to investigate candidates for health officer and make recommendations. No Madison doctors are seeking the position.

DEATHS

Dr. George F. Zaun, Milwaukee eye, ear, nose and throat specialist, died at St. Mary's Hospital on May 1st from complications following an operation for appendicitis. Dr. Zaun was born at Mequon but re-

ceived his early education at Cedarburg. He later entered the normal school at Oshkosh and graduated from the Rush Medical College at Chicago in 1894, locating in Milwaukee in 1902 after completing two years' practice in Vienna, Berlin, London and Paris hospitals. Doctor Zaun was a member of the Milwaukee County Medical Society, the State Medical Society and the American Medical Association. Besides his parents, he is survived by two sisters.

SOCIETY RECORDS

NEW MEMBERS

Henske, W. C., Chippewa Falls.
Murphy, G. F., Stratford.
Reese, Hans H., Mendota.
Haberland, E. J., 1280 Louis Ave., Milwaukee.
MacKedon, T. E., 3425 Lisbon Ave., Milwaukee.
MacKedon, W. L., 1204 Grand Ave., Milwaukee.
Robbins, J. M., 545 27th Ave., Milwaukee.
Smith, H. S., 1001 Packard Ave., Cudahy.
Stirn, Wm., 246 12th St., Milwaukee.
Hypes, F. E., Three Lakes.
VandeZande, C. U., Tripoli.
Schwartz, R., Chippewa Falls.

CHANGES IN ADDRESS

Christensen, F. C., New York City—2250 Kinzie Ave., Racine.
Southwick, Frank A., Los Angeles, Calif.—Stevens Point.
Tierney, E. F., Portage—Baraboo.
Sieberth, J., Lugerville—925 No. East St., Indianapolis, Ind.
Powers, Fred H., Beaver Dam—Christopher, Ill.

CORRESPONDENCE

Marinette, Wis.

Dear Mr. Crownhart:

This afternoon while enjoying my home, while the winds were quite uncomfortable outside, my mind turned to our state society and my pen turned out the enclosed thought. I am very much in earnest regarding this suggestion, and feel the day is over when a physician should be proud of his poverty.

Very truly,

MAURICE DUANE BIRD.

LET US OWN OUR HOME!

This applies to individuals as well as to our State Society. A man owning his resident is a better citizen than one who rents one.

The A. M. A. has built up a wonderful property, thanks to the men who have labored for its benefit. We have fifteen thousand dollars on hand now. Why not purchase a desirable property in Milwaukee, with the money available as part payment; develop an institution we all can be proud of, and have a suitable place that belongs to us!

A permanent home for our state organization; that aside from my personal residence is more dear than anything else in the world! Purchase a home for our State Medical Society.—M. D. B.

Moul-Boldt Basic Science Bill Passes Wisconsin Legislature; Now Before Governor for Approval

This article was written on May 29th. Final disposition of all health legislation pending before the Wisconsin Legislature will be reported in the July number of this Journal.—*Editor.*

The Basic Science Bill, 27A, was first engrossed and then put upon its final passage by the Wisconsin Senate on Tuesday, May 26th. Prior to engrossment an amendment to admit naprapaths to practice in Wisconsin was defeated 23 to 6. The bill was then engrossed Tuesday morning. A move to put the bill upon its final passage before recess Tuesday noon failed because of objection.

When the Senate met after recess Tuesday evening, Senator Boldt, Sheboygan Falls, again asked unanimous consent that the bill be put upon its final passage. There was no objection and the twenty-nine senators present all voted for the bill.

The bill now goes to the Governor for his approval. Governor Blaine will receive the enrolled copy of the measure the first week in June. The Governor has six days to approve or veto the bill from the time it is received by him.

With a unanimous vote in the Senate the Basic Science Bill comes close to having a perfect "score." Only five votes were registered against the bill of the one hundred and thirty-three contained in both houses of the legislature. If Governor Blaine approves the bill it becomes effective at once and appointment of the board of three lay educators will follow shortly thereafter.

The roll call on final passage in the Senate follows:

For the bill: Barber, Bilgrien, Boldt, Cashman, Casperson, Chase, Daggett, Englund, Garey, Gattelman, Heck, Hull, Hunt, Johnson, Kemp, Keppel, Lange, Mehigan, Morris, Padway, Polakowski, Quick, Roethe, Santhoff, Severson, Smith, Staudenmayer, Teasdale and Titus—29.

Against the bill: None.

Absent: Barker, Carroll, Schumann and White—4.

NAPRAPATHS DEFEATED

When the Basic Science Bill, 27A, came to a vote in the Senate on Tuesday, May 26, there was pending the so-called naprapathic amendment. This amendment recognized naprapathy as an approved means of treating the sick, exempted

naprapaths practicing in this state prior to February 1, 1925, and provided further, in the future, naprapaths might practice their "art" in this state upon securing a certificate of registration in the basic sciences and submitting evidence that they had graduated from a school of naprapathy.

After a sharp fight had been made on the amendment it was defeated by a vote of 23 to 6. The roll call on the amendment that would have recognized naprapaths follows:

To recognize naprapaths: Senators Garey, Hunt, Lange, Severson, Smith and Teasdale—6.

To reject the naprapath amendment: Senators Barber, Bilgrien, Boldt, Casperson, Chase, Daggett, Englund, Gattelman, Heck, Hull, Kemp, Keppel, Mehigan, Morris, Padway, Polakowski, Quick, Roethe, Sauthoff, Schumann, Staudenmayer, Titus and White—23.

Absent: Senators Barker, Carroll, Cashman, and Johnson—4.

"If these naprapaths are now legally practicing in this state they need no amendment," declared Senator Sauthoff, who led the fight to kill the amendment.

"The bill itself declares that it shall not affect any who were legally practicing in this state on February 1, 1925, whether such men were licensed, registered, or merely practicing under a permissive section. If these few naprapaths were not practicing legally their only claim for legislative consideration is that they were and are practicing illegally.

"I do not say that the recognition of naprapathy is not a proper subject for our consideration. But such consideration must be given in a separate bill and not come in an eleventh hour rider to such an important and basic piece of public health legislation as is this bill. I therefore move the rejection of this amendment and ask for a roll call."

"I cannot see," declared Senator Titus, Fond du Lac, "that we can vote to recognize something that we know nothing about. Unless someone can tell me what a naprapath is, and what he does, I must of course vote to reject the amendment."

"I have heard, Senator," responded Senator Padway, Milwaukee, "although I cannot vouch for

this information myself, that a naprapath is a cross between a gypsy fortune teller and a spiritualist."

Senator Hunt, River Falls, member of the Committee on Education and Public Welfare, declared that the representative of the naprapaths who appeared before the committee (Oscar M. Stamp, Milwaukee) had made a gentlemanly presentation of his subject and was entitled to consideration.

"We have osteopaths that adjust. We have chiropractors that adjust the vertebra. Why not have naprapaths to adjust the connective tissue as they say they do?"

Following defeat of the amendment the bill was ordered to a third reading (advanced) without discussion. Senator Boldt, Sheboygan Falls, then asked that the Senate put the bill upon its final passage. Objection was raised to this by Senator Hunt.

PERMIT BILL ADVANCED

Bill 466A which would combine the three existing permits for physicians under the state prohibition enforcement law into one inclusive permit was passed by the Assembly the third week in May. Following defeat of an amendment, 50 to 33, that would raise the fee from \$10 to \$15 (see April Journal) the bill was referred to the Joint Committee on Finance. The Finance Committee reported the bill back to the assembly early in May with a recommendation, 7 to 2, for passage. This bill is now in the Senate where it will receive its final consideration probably by the end of the first week in June.

PHYSICIANS EXEMPTED

A bill to raise standards of optometry in Wisconsin has been passed following assembly and senate amendments making clear that it did not affect physicians. The original bill would have brought all physicians under the optometry board examinations where such physicians desired to practice any part of what is defined as optometry. Only physicians licensed prior to January 1, 1926, would be exempted. This would have meant that physicians licensed after that date and desiring to fit glasses would have had to have completed a two year course in an optometry school and passed the state board of optometry examinations. This was all stricken from the bill by the assembly and senate amendments.

PHARMACY BILL SUBSTITUTE ADVANCED

During May the Assembly engrossed and then

passed, 65 to 9, a bill providing that in the future only registered pharmacists may own drug stores or pharmacies in this state, present ownership exempted. The bill as passed will be considered by the Senate probably the first week in June. Senator Barber, Marathon, will offer an amendment, it is understood, to exempt licensed physicians and surgeons from the terms of the act.

CHIROPRACTIC BILL ADVANCED

The Assembly in May by a vote of 40 to 20 passed the Minier Chiropractic bill, 322A. The Committee on Public Policy and Legislation of the State Medical Society is not opposing this measure so long as it is maintained in its present form without amendment.

Since 1915 chiropractors have been permitted to practice in Wisconsin under a permissive or exemption section without qualification whatsoever. This bill establishes a state board of chiropractic examiners who examine those who pass the Basic Science examination. The bill provides that their licenses may be revoked for the identical reasons that the law provides for revocation of a doctor's license. It further makes clear the present law that no one except those licensed to practice medicine and surgery, osteopathy, or osteopathy and surgery may use the title "Doctor" or any of its abbreviations.

An amendment by Mr. Coleman, Milwaukee, to give chiropractors the right to be called "Doctor" was defeated without a roll call. An amendment striking out the definition of chiropractic was offered by the Joint Committee on Finance and adopted. This amendment was offered to the committee by representatives of the Wisconsin Osteopathic Association who declared that the definition of chiropractic was the original definition of osteopathy.

A hearing on the Minier bill was given before the Senate Committee on Education and Public Welfare the second week in May. At this meeting F. G. Lundy, Marshfield, Secretary of the Wisconsin Chiropractic Association, appeared in opposition to the bill. Mr. Lundy declared he represented some eighty chiropractors and declared that the bill was entirely unsatisfactory. He offered a substitute amendment which was essentially the chiropractic bill of 1923. At the time this article is written no action had been taken by the Senate Committee. Any amendment or substitute to the present bill probably will be opposed by the State

Medical Society for the reason that such amendments would probably attempt to secure privileges for chiropractors in this state that would endanger the state's health program. Senate action on this bill will take place the first week in June.

It appears that the legislature will complete its

active work on or before June fifteenth. Ten days will elapse after that date before sine die adjournment is had. This is for the purpose of giving the Governor an opportunity to approve or disapprove of measures pending before him.

Occupational Therapy Has Important Role in Treatment of Wisconsin Tuberculous

BY MRS. LOUISE F. BRAND
Wisconsin Anti-Tuberculosis Association

Conservation of human life and conservation of Nature's resources, the occupational therapy department of a Wisconsin tuberculosis sanatorium and the United States Forest Service of Arizona, are being linked in a unique way in an experiment now being carried on in the southwestern state. Four Wisconsin bred carrier pigeons from the Willowbrook lofts, Kenosha, are being used to test out the theory held by two Arizona forest rangers that the use of homing pigeons in the fighting of forest fires will mean an inestimable saving of valuable property.

Familiar with the use of carrier pigeons in the World War, when they carried life saving messages day after day, one of the Arizona rangers, who is himself an ex-service man, conceived the idea that the birds could be used as messengers in a similar way to summon help for forest fire fighters. So he wrote, outlining his plan, to Vincent J. Pennefeather, a patient and part time employe at Willowbrook, Kenosha county's tuberculosis sanatorium. During the war, Mr. Pennefeather had supplied a number of the trained birds used by the United States army.

The plan, briefly, is for a ranger to carry one or more birds with him when he goes to investigate a rising spiral of smoke or other evidence that a blaze has started its work of devastation. If he needs help in putting out the blaze, instead of being forced to walk miles to the nearest telephone or back to the station, he can liberate a message-carrying bird which, if it is true to nature and training, will find its way quickly back to the station.

Thus, especially if the experiment justifies the faith of those who have it in hand, another by-product of the fight against tuberculosis takes on a significance which was undreamed of when the work was started. It calls attention anew to the



A Glimpse of Willowbrook Lofts. One of the Champion Pigeons, and V. J. Pennefeather, Who Owes His Life in Part to an Interesting Hobby and Avocation.

part which "hobbies" can be made to play in the treatment of disease, especially where the treatment must be continued over a long period of time.

Willowbrook lofts have a prominent place in the pioneer history of occupational therapy in Wisconsin. Soon after the opening of the sanatorium in 1916, Dr. G. Windesheim, its medical director, and Miss Constance Hayes who was at that time its superintendent (Miss Hayes has since married, is now Mrs. F. J. Smithwick and is living in Otowi, N. M.) attended the annual meeting of the Wisconsin Anti-Tuberculosis Association. At the sanatorium conference held in connection with this meeting, the breeding of homing pigeons and the establishment of a racing league between the various county sanatoria was advocated as an ideal form of recreation and occupation for patients to whom it might appeal and whose condition made such an interest a desirable part of the treatment.

Willowbrook sanatorium was the only one in the state which took up the suggestion. A few birds were secured and Mr. Pennefeather was placed in charge of them. He was a far advanced case and for months he had made but little apparent pro-



WALTER L. MAIN

gress under sanatorium treatment. From the first the patient took a keen interest in the pigeons and almost immediately his condition began to mend. Both Dr. Windesheim and Miss Ellida Dunker, the present superintendent of the sanatorium, give a large share of the credit for his progress to the homing pigeons.

Today Willowbrook lofts are among the best racing pigeon lofts in the Middle West, birds having been collected from England, Belgium and France as well as from various parts of the United States. Birds are also sold to foreign countries for although he stays closely at home, Mr. Pennefeather has become nationally known among the racing pigeon fraternity.

The May Crusader of the Wisconsin Anti-Tuberculosis under the title "A Famous Writer—A Shut-in—A Story Worth Reading" tells another story of how through occupational therapy a Wisconsin sanatorium patient was enabled to establish contacts with the outside world which brought him more than one inspiring friendship and which made it possible for him to spend many hours in profitable employment. The famous writer was Gene Stratton Porter and the shut-in was Walter L. Main, both of whom have died within the past few months. In the last two years Mrs. Porter had bought for the garden of her California home dozens of the gaily painted bird garden poles carved out and decorated by Mr. Main in the corner of his room in Mt. Washington sanatorium, Eau Claire.

Up to the time when occupational therapy was introduced in the Mount Washington sanatorium, Mr. Main had known nothing about painting. The



GENE STRATTON PORTER

making of bird garden markers, for which there was a ready sale, brought a new interest into the life of the shut-in and those who knew him best delight to tell of the way in which it transformed him from a difficult problem into a contented and comparatively happy patient even though he knew that for him there was no chance of a "cure."

Wisconsin sanatoria can furnish many an instance of this transforming power and in that power many a doctor and many a nurse who knows by sad experience how difficult the tuberculous can sometimes be, finds sufficient reason for being an occupational therapy enthusiast. But the big reason, of course, lies in the influential part which it plays in the treatment of the hopeful case.

SECRETARY OFFERS AID

Because of the three separate forms required under the State Prohibition Enforcement Act for the use of alcohol and liquor by physicians, many members of the State Society have received notices that through oversight they have neglected to file one or more of these permit requests. Members of the Society are advised that their secretary is in constant touch with the state prohibition office and his services are always available for the purpose of straightening out any misunderstandings. A bill is now pending in the legislature which, if passed, will combine the three existing permit forms into one.

ROTARIANS VISIT STATE HOSPITAL

Physicians and dentists in attendance at the District Rotary Conference held at Madison on April 30th were entertained at a group luncheon held at the State of Wisconsin General Hospital.

Hospitals in Wisconsin; A Historical Survey, 1816-1925

BY CHARLES R. BARDEEN, M.D.,

Dean of the University of Wisconsin Medical School.

Editor's Note—This Journal deems itself fortunate indeed to reprint herewith this thorough historical survey which appears in the 1925 Wisconsin Blue Book. This article will be of interest to every reader and we express our appreciation for permission to reprint this article from the Blue Book to Mr. Fred L. Holmes, Madison, its editor.

At the time Wisconsin was admitted to the Union as a state, hospitals were in general looked upon essentially as asylums for the sick paupers. Today they are highly specialized institutions for treatment of patients, education of nurses and physicians, and advance of medical knowledge. In the old days they were charitable institutions shunned by all but the destitute. Today the well-to-do are willing to pay enough for hospital care to make it possible for hospitals to do much for those unable to pay for such care. Health has become the subject not only of individual but of general public concern and hospitals have become indispensable instruments in the warfare against disease and the promotion of hygiene. It is now recognized that the state should insure every individual the right to hospital care when he needs it and, if he cannot afford to pay for this care, he should be furnished it at public expense, not as a matter of charity but for the sake of the general good. This point of view has been gradually evolved with the growth and development of the state.

We shall consider the development of hospitals in Wisconsin under the following headings:

- (1) Military Hospitals
- (2) Hospitals, Asylums, and Schools for the Insane, Feeble-minded, and Epileptic
- (3) Isolation Hospitals and Tuberculosis Sanitariums.
- (4) Hospitals for Infants and Children
- (5) General Hospitals and Sanitariums
- (6) The Wisconsin General Hospital

1. MILITARY HOSPITALS

The first hospitals in Wisconsin were military and a part of the military forts erected for protec-

tion against the Indians. Fort Howard was established by the federal government at Green Bay in 1816, Fort Crawford at Prairie du Chien, in 1816, and Fort Winnebago at Portage in 1828. Fig. 1 pictures the hospital and surgeon's headquarters at Fort Howard. Here Dr. William Beaumont was stationed in 1826-27. He was stationed at Fort Crawford in 1829. In 1822, when Beaumont was stationed at Fort Mackinac in Michigan, Alexis St. Martin was accidentally shot in the abdomen. Beaumont saved this man's life, but when the wound healed there was an opening through the abdominal wall into the stomach which enabled Beaumont to make a study of digestion which continued over several years and constituted a brilliant contribution to knowledge of this subject. A part of this work was carried on while Beaumont was stationed at Fort Crawford. Nothing to equal this in relative scientific importance to medicine has since been done in this state. Beaumont while at Fort Howard introduced the use of vaccination as a preventative of smallpox, into the Fox River Valley. An interesting sketch of Beaumont's life in Wisconsin, may be found in the Wisconsin Magazine of History, March 21, 1921, p. 263-280.

The next military hospitals in Wisconsin were established during and following the Civil War. The Harvey United States Army General Hospital was established at Madison in October, 1863. This hospital was due to the zeal of Mrs. Cordelia A. P. Harvey, the widow of Governor Louis P. Harvey. After Governor Harvey's death by accident in 1862, Mrs. Harvey was appointed sanitary agent for Wisconsin soldiers in the United States army. Her duties led her to understand that many of these soldiers were dying in the army hospitals in the South whose lives might be saved if they could be brought to the North for medical care. With some difficulty, well described in Hurn's Wisconsin Women in the War, she persuaded President Lincoln to issue the order to establish the hospital mentioned above. This hospital was located in the Farwell house, a three-storied octagonal building near Lake Monona. In this hospital and in a branch established at Camp Randall, there were in 1864, 630 patients. The



Fig. 1. Hospital and Surgeon's Headquarters at Fort Howard, near Green Bay, as it appeared 1827-28. From Wisconsin Historical Magazine, Vol. IV, 1920-21, p. 272. Courtesy State Historical Society.

original building was enlarged by the erection of three wings by the United States government (fig. 2). In 1864 two other army hospitals were established in Wisconsin, one at Milwaukee, "an officers' hospital," and one, the "Swift Hospital," at Prairie du Chien.

The Harvey Hospital did much good but it was discontinued at the end of the war. Through the efforts of Mrs. Harvey some of her friends purchased the property and converted it into a home for orphans, the children of men enlisted in Wisconsin who died in military or naval service or as the result of such service. The age limits were four to fourteen years and preference was given to those who had lost both parents. The support of this home was taken over by the state in 1866. In 1875 it was discontinued and a small monthly allowance was made to relatives or to private orphan asylums for the care of orphans under 14 years of age then in residence. This institution accomplished much good. It was in charge of Mrs. Harvey up to 1867 and at one time housed three hundred children. While this institution was comparatively short lived it stimulated the development throughout the country, first, of orphanages for soldiers' children, and, subsequently, of other orphan asylums under governmental or private support. In recent years it has come to be realized that when a home is possible a

child is usually better off there than in an asylum. The small stipend given mothers when the home was discontinued, \$5.00 per month, was inadequate but the principal was a good one and Wisconsin now has an excellent mothers' pension law.

The Federal hospitals established during the war in Wisconsin were temporary. In 1867 the United States established near Milwaukee the Northwestern Branch National Home for Disabled Volunteer Soldiers. This was largely due to the zeal of patriotic women and men of Milwaukee who in 1865 organized a Wisconsin Soldiers' Home and gave food and shelter to five thousand soldiers during that year. At a fair given for funds for its support over \$100,000 was raised. Contributions were received from all over the state. At the present time there are 433 general hospital beds at the National Home there.

In 1887-8 there was established near Waupaca the Wisconsin Veterans' Home. The initiative for this was taken by the Grand Army of the Republic and the Women's Relief Corps. Waupaca contributed the beautiful site on which this is located together with the hotel building and six cottages then on that site. The Grand Army and the Women's Relief Corps raised funds for furnishing the buildings. The state subsequently erected other buildings and assumed the main overhead cost. The federal government has contributed

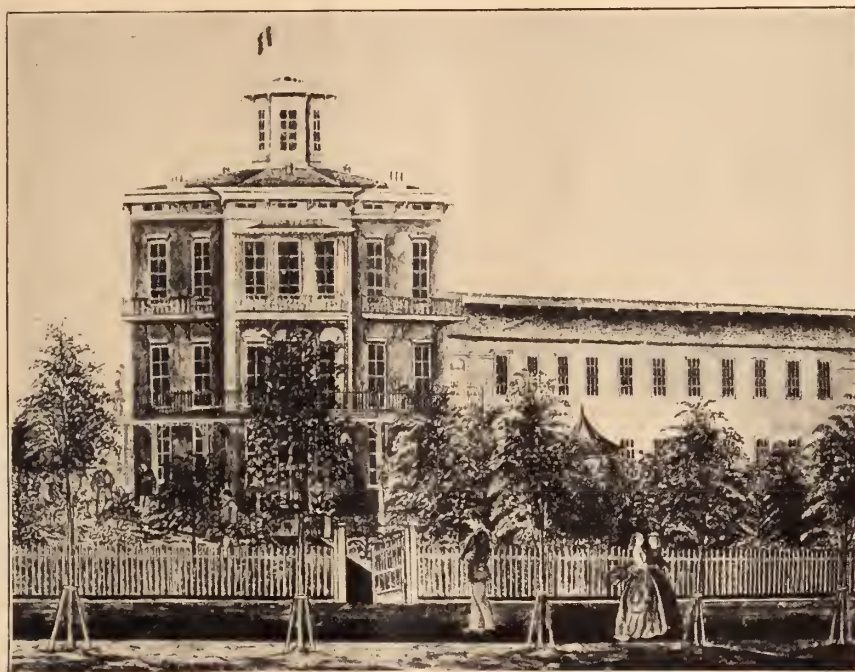


Fig. 2. Harvey Army Hospital, Madison, 1863. From a picture in the Veterans' Museum at the State Capitol.

toward the cost of care of the inmates. It has been open not only to veterans but to their mothers, wives, and widows. While designed primarily for the indigent, emphasis has been placed on its being not a charitable institution but rather a recognition of a debt due for service. Those who could afford to do so have, however, been expected to pay something toward their care. The home has always maintained a well conducted hospital the relative importance of which has increased as the average age of the inmates has increased. At present there are about one hundred seventy beds in the hospital division. There have been over seven hundred inmates in this institution but at present the number is much less.

The Spanish-American War in 1898 led to no special hospital development in Wisconsin although it served to emphasize the importance of hygiene and of good care of the sick. The national and state Veteran Homes have sufficed to provide such special local hospital care as has been called for as the result of this war. On the other hand the recent war has done much to stimulate hospital development in the state.

In 1919 there was established at Waukesha the United States Veterans' Hospital No. 37. This is a federal hospital with two hundred forty beds for the care of veterans suffering with mental and nervous diseases. At National Home near Mil-

waukee there has just been completed a federal hospital with twelve hundred beds for the care of veterans suffering with tuberculosis. At Farwell's Point near Madison there has been completed the Wisconsin Memorial Hospital for the care and treatment of discharged soldiers, nurses and marines, residents of this state at the time of their enlistment, who served in the armed forces of the United States in the late war against Germany and her allies and who are suffering from mental diseases and who are or may hereafter become beneficiaries of the federal war risk insurance act. This hospital was erected by the state in 1922-24 and constitutes the hospital division of the State Psychopathic Institute under the supervision of the State Board of Control. The federal government pays for the cost of the care of the inmates. It is especially well designed on the cottage plan in separate units and is equipped for scientific treatment and humane care. It has about two hundred beds.

The federal government, in addition to maintaining federal hospitals at Waukesha and National Home and contributing to the cost of care of veterans at the Wisconsin Veterans' Home and the Wisconsin Memorial Hospital, maintains small hospitals in connection with its care of the In-

(Continued on Page XXVI.)

THE JOURNAL BOOK SHELF

Child Health Library. Ten volumes. Robert K. Haas, Inc., New York.

Local Anesthesia Simplified. By John Jacob Posner, D.D.S., Chief of the Dental Department Harlem Dispensary, Visiting Dental Surgeon, St. Luke's Hospital, New York. Fifty-five illustrations. C. V. Mosby Company, St. Louis, 1924.

The Medical Sciences in the German Universities—A Study in the History of Civilization. Translated from the German of Theodor Billroth, Introduction by William H. Welch. The MacMillan Co., New York, 1924.

Operative Surgery. By Warren Stone Bickham, M.D., F.A.C.S., Former Surgeon in charge of General Surgery, Manhattan State Hospital, New York, Former Visiting Surgeon to Charity and to Touro Hospitals, New Orleans. In six octavo volumes totaling approximately 5,400 pages with 6,378 illustrations, mostly original and separate Desk Index Volume. Volume VI, completing the set, contains 989 pages with 1,224 illustrations. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$10.00 per volume. Sold by subscription only. Index Volume Free.

The Surgical Clinics of North America. Portland-Seattle Number, October, 1924. Volume IV, Number V. 263 pages with 12 illustrations. Paper \$12.00; Cloth \$16.00 net. W. B. Saunders Company, Philadelphia and London.

Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association for 1924. Cloth. Price, postpaid, \$1.00. Pp. 82. Chicago: American Medical Association, 1925.

A Diabetic Manual. By Elliott P. Joslin, M. D., Clinical Professor of Medicine, Harvard Medical School; Consulting Physician, Boston City Hospital; Physician to New England Deaconess Hospital. For the mutual use of Doctor and Patient. Illustrated. Third Edition, thoroughly revised. Lea & Febiger, Philadelphia and New York, 1924. Price \$2.00.

A Textbook of Materia Medica for Nurses. By A. L. Muirhead, M. D., Late Professor of Pharmacology, Creighton Medical College, Omaha, Nebr., and Edith P. Brodie, A. B., R. N., Instructor in Material Medica and Therapeutics, Washington University School of Nursing, St. Louis, Mo. Second Edition. C. V. Mosby Company, St. Louis, 1924. Price \$2.00.

The Diagnosis of Children's Diseases. With special attention to the diseases of infancy. By Prof. Dr. E. Feer, Director of the University Children's Clinic, Zurich, Switzerland. Translated by Carl Ahrendt Scherer, M. D., F. A. C. S. J. B. Lippincott Company, Philadelphia, London, Montreal, 1925.

BOOKS RECEIVED FOR REVIEW

Clinical Features of Heart Disease. An Interpretation of the Mechanics of Diagnosis for Practitioners. By Leroy Crummer, M. D., Prof. of Medicine, University of Nebraska. Price, \$3.00. Paul B. Hoeber, Inc., New York, 1925.

Medical and Surgical Report of The Roosevelt Hospital, New York. Second series, 1925, based on the work of the years 1915-1924 inclusive. Price, \$5.00. Paul B. Hoeber, Inc., New York City.

The Medical Clinics of North America. Volume VIII, Number V, March, 1925 (Boston Number). Octavo of 247 pages and 21 illustrations. Per clinic year (July, 1924, to May, 1925): Paper, \$12.00; cloth, \$16.00, net. W. B. Saunders Company, Philadelphia and London.

A Compend of Gynecology. By William Hughes Wells, M. D., Late Asst. Prof. of Obstetrics in the Jefferson Medical College; Asst. Obstetrician in the Maternity Dept. of the Jefferson Medical College Hospital. Fifth Edition, revised and enlarged, with 167 illustrations. Price \$2.00, net. P. Blakiston's Son & Co., Philadelphia.

The Health-Care of the Baby. A handbook for mothers and nurses. By Louis Fischer, M. D., Attending physician to the Willard Parker and Riverside Hospitals; Chief attending pediatricist to the Zion Hospital of Brooklyn; Medical director of the Infantorium. Fifteenth edition, completely revised. Funk & Wagnalls Co., New York and London, 1925.

Personal Hygiene Applied. By Jesse Feiring Williams, M. D., Prof. of physical education, Teachers College, Columbia University, New York City. Second edition revised. 12mo of 414 pages, illustrated. W. B. Saunders Co., Philadelphia and London, 1925. Cloth, \$2.00, net.

Diseases of Children for Nurses. Including pediatric nursing, infant feeding, therapeutic measures employed in childhood, treatment for emergencies, prophylaxis and hygiene. By Robert S. McCombs, M. D., Associate in Medicine at the Philadelphia Polyclinic; instructor of nurses at the Children's Hospital of Philadelphia. Fifth edition, thoroughly revised. Octavo of 581 pages, illustrated. Cloth, \$2.75, net. W. B. Saunders Co., Philadelphia and London, 1925.

Diet in Health and Disease. By Julius Friedenwald, M. D., Prof. of Gastro-Enterology in the University of Maryland School of Medicine, Baltimore; and John Ruhrah, M. D., Prof. of Diseases of Children in the University of Maryland, Baltimore. Sixth edition, thoroughly revised. Octavo of 987 pages. W. B. Saunders Co., Philadelphia and London, 1925. Cloth, \$8.00, net.



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BOOK REVIEWS

WILLIAM A. MOWRY, M. D.,

Editor

Any scientific publication reviewed in this column may be obtained for inspection. Orders for such inspection should be directed to Mr. W. M. Smith, Librarian, Medical Library, University of Wisconsin, Madison, and should be placed through your local librarian wherever possible. Where there is no local librarian orders may be sent direct. These new books will be loaned for an inspection period only.

The Physiology of Mind. An interpretation based on Biological, Morphological, Physical and Chemical Considerations. By Francis X. Dercum, M. D., Ph. D., Professor of Nervous and Mental Diseases in the Jefferson Medical College, Philadelphia. Second edition, reset. 12mo of 287 pages. Philadelphia and London: W. B. Saunders Company, 1925. Cloth, \$3.50, net.

The author of this work constantly refers to it in the text as an essay. The word essay seems to be used quite accurately and properly, for the strength of the book lies in the point of view it presents and the interpretations it offers. It is not the report of recent research, but, rather, and interpretation of such research. One might almost say that it contains the philosophy of physiology. In that connection one should mention that Dr. Dercum is a member of the American Philosophical Society. As a philosopher he is definitely a mechanist, so far as one may judge from the present text. Inasmuch as he is dealing with the mind, he is treading upon ground more or less familiar to the psychologist. His explanation of his point of view and his title may be best stated in his own words:

"Physiology of mind embraces what is ordinarily meant by psychology. In any event, psychology can only be regarded as a department of brain physiology." The author objects to the scientific use of the word *psychology*. If one were to call him a psychologist, however, one must class him in that recent school called behaviorism. Mind is to him but a reaction of the organism to its environment. It is a *function*, then, rather than a *thing*.

His chapters on *The Role of the Thalamus*, *The Synthesis of Special Sense Impressions*, and *Speech* contain a very stimulating and modern account of the function of the subcortical centers. One gathers the general picture of the relations between the cortex and these centers and is able to see them with some perspective rather than being confused by a mass of experimental data on each of them without considering the general relationships.

The main body of the book closes with a long chapter on the pathological physiology of the mind, wherein the author traces the implications of his theories in the study of the amemias and dementias. The book would appeal, among others, to the practicing physician who is asked from time to time to sign certificates as to the mental condition of patients about whose conduct the law is inquisitive. Such a physician (and most prac-

ticing physicians are placed in this situation from time to time) should not be without the very modern point presented in this text. It is a book that might be recommended also to those lay persons who are interested in psychology or in its application to education or social work.

The book contains an appendix which should be removed. The high scholarly tone of the book is seriously marred by the invective style of this last chapter. The subject of the chapter is *Freudism*. If Freudism is unworthy of the study of physicians, as our author claims, such a statement should be made, but it would be most effective if made in the calm, judicious, intellectual fashion of scientific writings. Speaking about Freudism, the author remarks, "In what words shall be characterized such fantastic nonsense, such vacuous, hair-brained absurdities, such meaningless jargon—Freudism stands on the same footing as Eddyism, Christian Science, and like forms of mental healing. Like the latter, it is mystic medicine." In his discussion of Freudism, the author has a good deal to say about psychoanalysis or "mental catharsis." He attacks psychoanalysis with a bitterness that one is somewhat at a loss to understand inasmuch as his whole text is, in a sense, a psychoanalysis; and the methods that he would seem to advise in the study of the mental condition of his patients are decidedly psychoanalytical. Dr. Dercum evidently practices a very thorough analysis of the mental reactions of each patient to his environment. Would it not be more accurate, then, to object, if he wishes so to do, to *Freudian* psychoanalysis as over and against the psychoanalysis that follows the tenets of other schools of mental science. Consequently, one is led to believe that, after appendectomy, the text under consideration would probably *live*. It deserves great success.—Robert West.

Safeguarding Children's Nerves. A Handbook of Mental Hygiene by James J. Walsh, M. D., Ph. D., Sc. D., Professor of Physiological Psychology, Cathedral College, and John A. Foote, M. D., Professor of Diseases of Children, Georgetown University Medical School with a Foreword by Honorable Herbert Hoover. Cloth, price, \$2.00. Pp. 272 with illustrations. Philadelphia: J. B. Lippincott Company, 1924.

In this book the authors present a well balanced discussion upon the prevention and the solution of problems of child life. Questions concerning the upbuilding and restoration of the mental and nervous health of the infant and the child are answered with sound and readily applied advice.

The subject matter is divided into eighteen chapters of varying lengths. In the first two chapters comment is made upon the increase in patients, particularly children, suffering from nervous diseases, attributing this fact to modern civilization and especially to modern city life. Here as all through the book the gospel of outdoor life, healthy tiredness, constant occupation, and plain food in abundance is preached. How to spoil and how to unspoil a child is next dealt with. The influence of heredity is then taken up and attention is called to the greater importance of environment. The next chapter

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has to do with the feeding of children, and with the methods of overcoming food dislikes. Rest and recreation are then discussed. Careful discipline is looked upon as probably the most important condition of their early years for nervous and irritable children.

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The book is heartily recommended to all those interested in child life as being most entertainingly written as well as instructive.—J. E. G.

Report on Second International Congress of Military Medicine and Pharmacy. By Commander William Seaman Bainbridge, M. D., Rome, May-June, 1923. Reprinted from the Military Surgeon.

The Report on Second International Congress of Military Medicine and Pharmacy, May-June, 1923, by William Seaman Bainbridge, represents in a concise form the accumulation of military medical knowledge acquired by the allied armies during the world war. The scope of the subject material is very extensive including hygiene, problems of medicine and surgery, hospitalization, neuro-psychiatric findings, laboratory equipment, etc. It is a well written and interesting little volume of sound facts and can be read with profit by any one interested in the achievements of our military medical personnel.—B. H. H.

Diseases of the Heart. By Henri Vaquez, M. D., Professor of the Faculty of Medicine of Paris. Translated and edited by George F. Laidlaw, M. D., Associate Physician to the Fifth Avenue Hospital, New York City. Introduction by William S. Thayer, M. D., Johns Hopkins Hospital, Baltimore, Md. Octavo volume of 743 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$8.50, net.

This treatise, by the most eminent cardiologist of France, is full and comprehensive and abounds in accurate clinical description. Sufficient references to the literature are given to serve as a guide to further study from original sources. Prof. Vaquez's own important contributions, notably in the field of cardiac roentgenology, serve as an admirable basis for the accurate treatment of the subject on modern lines, but are kept well within the limits demanded by a well balanced discussion. Eminent as an investigator and clinician, the author has obviously put much labor and care in the construction of this volume. It stands out in glaring contrast to many of our present day text books, written by men who have little or no first hand knowledge of the subject of which they treat, largely compiled as a hodge podge from other sources and thrown together in a haphazard and ill-considered manner. When men of the eminence of Vaquez give us a glimpse into the wealth of their own comprehensive first hand knowledge and take the same care in the preparation of a text book as they do in the composition of scientific papers, a real

contribution is made to medical education, the influence of which may last for years.—J. A. E. E.

Lectures on Pathology. By Ludwig Aschoff, M. D., Professor of Pathologic Anatomy, University of Freiburg, Germany. Delivered in the United States, 1924. With thirty-five illustrations. Paul B. Hoeber, Inc., New York, 1924. Price, \$5.00.

This book is to be recommended to all who are interested in the fundamentals of medical science—but especially to the one who believes that morphological pathology is a dead science which can no longer contribute to medical progress. He may find the lectures hard to read (probably the translator's fault); he may not agree with the conclusions of the author; but he will have the last word in German pathology on the subjects treated and from the Dean of German Pathologists. The book contains fourteen lectures, delivered in this country by Dr. Aschoff, which cover such fundamental subjects as Inflammation, Thrombosis, Pulmonary Consumption, Gall Stones, Gastric Ulcer, Arterio Sclerosis, Renal Function and Nephritis. Goitre and the reticulo-endothelial system, and while morphology is stressed, it is stressed only as indicating an underlying functional activity or functional change.

Space is lacking to touch upon the additions to our pathological knowledge made in each chapter or upon the new conceptions of pathological processes advocated by the author. The book must be studied, not read, to be appreciated.—C. H. B.

The Inheritance of Acquired Characteristics. By Paul Kammerer, M. D. Boni and Liveright, Publishers, New York.

In the pages of Doctor Kammerer's book will be found brought together most of the literature on the inheritance of body-acquirements. The book is intended to be a popular presentation and is, therefore, almost wholly lacking in critical, detailed analysis. Indeed, the chief impression that the reviewer carries away after reading it is that most of the alleged cases would not stand up under careful analysis. In nearly every case cited there could be at least an equally plausible alternative explanation. The field is a very intricate one in which it is extremely difficult to get unequivocal results. Some of the evidence brought forward is highly suggestive, however, and might become convincing if the experiments were repeated with positive results along with carefully checked controls. The outstanding objection to most of the experimental work cited is that it was seemingly done without running controls, and in some instances the natural range of variation in the animals experimented upon was undetermined. The last third of the book is given over to an attempt to apply the material of the earlier part, together with new admixtures, to the field of eugenics. It is largely a series of opinions—some of them based on such insecure foundations as Steinach's so-called rejuvenation experiments—and is of doubtful value to the student of eugenics.

—M. F. G.

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A Suggested Analogy Between Hyperthyroidism and Gastric Ulcer*

BY GEORGE W. CRILE, M. D.

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That peptic ulcer is characterized by the presence of a hypersecretion of the gastric juice is generally acknowledged, though whether or not hyperacidity is a causative factor is disputed. Thus Frick makes the statement that "a hyperactivity of all the gastric functions is the usual concomitant of peptic ulcer; i. e., hypersensitiveness as manifested by pain, hypermotility and spasm, hyperacidity, and hypersecretion"; and Mann and Williamson by experiments on dogs have produced typical subacute or chronic peptic ulcers experimentally by diverting the secretions which neutralize the gastric juice as it leaves the stomach thus increasing the degree of acidity. On the other hand, Smithies asserts that "hyperacidity does not mean ulcer, nor does ulcer indicate hyperacidity".

Deaver in a paper delivered a few months ago makes the statement: "As to the gastric chemistry, it is pretty well acknowledged that some change in the chemistry of the stomach and ulcer go hand in hand, the change usually consisting of a hyperchlorhydria. I say usually, because I am well aware that not all cases of peptic ulcer are associated with hyperacidity, but the relationship between the two is sufficiently frequent to be more than incidental. Whether the hypersecretion, when present, produces the ulcer, or the ulcer the hypersecretion is still a matter of argument. While the consensus of opinion seems to be that hyperacidity is first present, it nevertheless would seem that the ulceration once formed without doubt maintains the hypersecretion, thus creating a vicious circle with its attendant clinical symptoms and pathological manifestations. In other words, hyperacidity prepares the way for the action of whatever secondary factors, usually of an infectious or toxic nature, may be at work in the pathogenesis of chronic peptic ulcer."

Aside from the hyperfunction of the mechanism which governs the gastric secretions which is

analogous to the hyperfunction of the thyroid gland in hyperthyroidism, the following facts are significant in their bearing upon the "kinetic" factors in the production of peptic ulcer and in their further indication of the analogy between peptic ulcer and hyperthyroidism. The occurrence of peptic ulcer is more common in young adults. It is true that certain statistics give the average age of patients with gastric ulcer as 40 years or even more; if the histories of these cases are studied, however, it will be found in the great majority of cases that the patient presents himself for treatment with a history of repeated attacks of "indigestion" or "dyspepsia" extending over long periods of years. According to Smithies, 20 years is the average length of time which has elapsed since the first remembered attack. It is more common in individuals of strenuous occupations associated with mental and nervous strain. It is significant that the highest incidence among the most active races is in North America. It is stated also that ulcer occurs most frequently in Great Britain, Germany, France and the United States, and that it is much less common among the Japanese and Chinese than among the inhabitants of the Western countries.

These facts regarding peptic ulcer indicate the similarity of the phenomena accompanying the incidence and course of peptic ulcer and the incidence and course of hyperthyroidism. Hypersecretion of acid is the central feature of, if not the actual cause of peptic ulcer; hypersecretion of the thyroid hormone is the central feature of, if not the actual cause of hyperthyroidism. Hyperacidity and hyperthyroidism both tend to elect young adult life; both flourish in the atmosphere of stress and striving. Hyperthyroidism and hyperacidity are induced and are augmented by overwork, by worry, by focal infections, by auto-intoxication; both are increased by high protein diet; both are associated with a changed personality; both are improved by a holiday with complete change of environment—by camping, fishing,

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hunting, travel, motoring, by the substitution of favorable news for bad news, of assurance for anxiety; both tend to chronicity or to relapse. Neither is prevalent among inferior races, among the indolent or dullards of higher races or among degenerates, morons or insane; both flourish in driving, compelling, ambitious, conscientious personalities. Both are prevalent among individuals of keen desires and internal struggle; among those who grieve and fret. In general, the incidence of both peptic ulcer and hyperthyroidism is highest in those men and women of the white race who are carrying the burden of civilization.

RE-EDUCATION REQUIRED

Moreover, as is indicated by the peculiarities of these individuals, the successful management of both hyperthyroidism and hyperacidity requires a re-education, a new point of view regarding life, a new philosophy, no less than rest and diet and surgery. In each of these conditions, therefore, the result of medical management which ranges from no relief to permanent recovery, depends on the personal equation of the medical advisor, and equally upon the personal equation of the patient.

In view of these analogies it is not surprising to find a controversy as to the relative values of medical treatment and of surgery in the treatment of peptic ulcer which is analogous to that which has been waged in connection with the treatment of hyperthyroidism. Medical treatment plus rest relieves the symptoms of peptic ulcer; medical treatment plus rest relieves the symptoms of hyperthyroidism. In cases of peptic ulcer the period of freedom from symptoms is in direct relation to the length and periodicity of adherence to a properly controlled hygienic regimen. The same is true of hyperthyroidism. A return to the former environment or a breaking away from the prescribed regimen is accompanied by a return of the symptoms of peptic ulcer. The same is true of hyperthyroidism. It would appear logical, therefore, that in the case of peptic ulcer, that portion of the mucosa, the resistance of which has already been weakened, should be removed and that the possibility of hypersecretion, a certain and aggravating factor, if not the immediate cause of the ulcer, should be removed. In other words, hyperthyroidism may be reduced to normal thyroidism by the excision of a sufficient amount of secreting gland; hyperacidity may be reduced to normal acidity by the excision of a sufficient amount of

the acid secreting part of the stomach. In cases of hyperthyroidism ligations give temporary, sometimes permanent relief; in cases of chronic gastric ulcer a gastro-enterostomy gives temporary, sometimes permanent relief. In more than 90 per cent of the cases of peptic ulcer and of hyperthyroidism, permanent relief is achieved by the actual removal of a sufficient amount of the hypersecreting tissue so that the secretion of the remainder may approach the normal, the operation being supplemented by the elimination of focal infection and of auto-intoxication and by the establishment of an especially planned hygienic regimen.

INTIMATE RELATION

It is probably not by a curious chance that peptic ulcer and hyperthyroidism present so many analogies. Their intimate essential relation is seen at once when we consider that the organism of man is not made up of unrelated disassociated organs, each going its own way independently of the rest, but that it is a highly articulated mechanism in which every organ is related to every other organ, just as the motor of the automobile bears an essential relation to the transmission and the transmission bears as essential a relation to the motor. A view of the human organism as a whole shows that the brain, the liver, the thyroid, the adrenals and the digestive tract, each responds to every stimulus—each organ in its own way. Thus, emotion, exertion, infection, modify profoundly each of the several organs. Thus, the modification of the thyroid is expressed by hypersecretion and hyperplasia; the modification of the stomach is expressed by hypersecretion.

Hyperthyroidism has been all but conquered. Hypersecretion of the gastric juice and chronic gastric ulcer have all but defeated the surgeon and the physician. Sippy treatment alone is temporizing, and until recently the surgical treatment of gastric ulcer has been in the tentative position of surgery of the thyroid before the thyroidectomy of Kocher.

On the other hand, surgical treatment of duodenal ulcer by gastro-enterostomy, as indicated by Balfour's report for the Mayo Clinic, has shown satisfactory results in 95 per cent of the cases. These results present a marked contrast to the increased mortality and the numerous complications which follow gastro-enterostomy for gastric ulcer. The unsolved problem is the treatment of chronic gastric ulcer—especially the ulcer with a

heavy indurated base and adhesions. It is frankly correct to state that in the treatment of ulcers of this type both medicine and surgery have failed. Gastro-enterostomy, as Moynihan states, offers trivial advantages. Sleeve resection cripples the motility of the stomach. Cauterization substitutes a burn and a scar for the existing ulcer, if it is only an ulcer; and if it is a cancer then cauterization is certainly inadequate, for it leaves untouched the fundamental cause of the ulcer which preceded the cancer. Pyloroplasty in the treatment of ulcers of the lesser curvature would seem analogous to excision of the thymus for hyperthyroidism!

Are we not ready to wash out our past score and begin anew? I am for just that—for starting anew—as Moynihan, Haberer, Finsterer and others have done abroad.

In a recent visit to the clinic of Moynihan and to clinics in Scandinavia, I found that everywhere gastro-enterostomy had given place to gastric resection, the operation consisting in the resection of half the stomach, including the pylorus, for the definite purpose of reducing hypersecretion just as thyroidectomy is performed to reduce the thyroid secretion. Moynihan, Schoemaker, Finsterer and Haberer have an immediate mortality of from two to three per cent and each reports that his clinical results are wholly different from the results of gastro-enterostomy, of cauterization or of local excision; that is to say, the operative objective is changed from the excision of the lesion or drainage or alkalization, to the fundamental underlying cause of the condition; namely, the hypersecretion itself. Moreover, not only is the ulcer-provoking hypersecretion controlled but the common site of cancer of the stomach is removed.

One objection to this radical procedure seems to be the wide opening in the jejunum. This, I have found, is readily overcome by a modification in technic whereby the large opening in the stomach is adjusted to a small opening in the jejunum.

Since shock and hemorrhage are controlled by seizing and holding the initiative by blood transfusion, water, morphin and rest and by a shockless operation achieved by local anesthesia, nitrous oxid-oxygen analgesia and minimum trauma, the feeblest patients can be carried through successfully. Not only the results of the operation itself

but infections also are controlled by the technical management and the maintenance of general resistance.

Finally, and here again the ever present analogy with hyperthyroidism presents itself—the operation is but one factor in the final result. Recovery demands a prolonged control of the patient under a regimen of enforced rest, prescribed diet and adjusted environment.

PLAN OF TREATMENT

The repair of herniæ, the removal of a diseased appendix, operations upon bones and joints, operations for the removal of benign and malignant tumors are for the repair of pathologic anatomical conditions; operations for hyperthyroidism and disturbed gastric function are occasioned by a pathologic physiological condition. The line of problems presented by these conditions must therefore be interpreted in terms of physiology and not in terms of anatomy. For the present in our clinic we have adopted the following general plan of treatment:

1. All patients with acute gastric or duodenal ulcers are referred first to the medical department for treatment and management.
2. If medical relief does not appear within two weeks the patient is referred to the surgical department.
3. In case of duodenal ulcer Finney's pyloroplasty is used if local conditions such as adhesions permit; in suitable cases a gastro-duodenostomy is made; in all others a posterior gastro-enterostomy.
4. In cases of calloused gastric ulcer, and of peptic ulcer following gastro-enterostomy for duodenal ulcer a wide resection of the stomach including the pylorus is made. This produces a permanent reduction in gastric secretion and up to the present time has been followed by better clinical results than have heretofore been secured.

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Gastric and Duodenal Ulcers*

BY E. STARR JUDD, M. D.

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The most important consideration of any disease is the etiology. If the cause of a lesion can be determined, it is only a short time before methods are developed to prevent and to cure it. Unfortunately, in spite of extensive investigation, the cause of ulcers of the stomach and duodenum has not been discovered. The etiology of chronic peptic ulcer in children is probably the same as in adults. Predisposing factors such as alcohol and tobacco, factors seriously considered by certain observers who have had wide experience with cases of ulcer are usually entirely absent in children. Statistics have been compiled to show the influence of heredity. It is doubtful, however, whether it can be proved that ulcers are inherited. I have a case in mind, a boy aged twelve years on whom I operated last year, for a chronic gastric ulcer. I examined the mother at this time and found an ulcer of the duodenum.

Rosenow and his associates have shown that the bacteriologic aspect of ulcer of the stomach in man and domestic animals often is associated with streptococcal infection in the ulcerated area; that foci of infection such as tonsils and teeth harbor the streptococcus and predispose to ulcer, and that the streptococcus isolated from the ulcer and the distant focus has elective affinity for the stomach, producing hemorrhage and ulcer on intravenous injection.

The character of the experimentally produced ulcers and their location, especially with regard to nonhealing, resemble those of spontaneous disease. The presence of the streptococcus in ulcers in dogs, produced by the method of Mann and Williamson, its elective localizing power on intravenous injection, its presence in foci of infection, and its ability to produce this poison *in vitro*, indicate that it is not a secondary invader, but that it may play an important part in the production of these ulcers. It has also been found that streptococcal strains from the different species of animals brought about lesions of the stomach similar in type and location to the strains isolated from human ulcers.

Certain recent experimental studies carried out at the Institute of Experimental Medicine at the Clinic, corroborate Rosenow's work and extend the early results with regard to the importance of the streptococcus as a causative factor in the production of ulcer. Rosenow believes that the streptococcus of ulcer produces poison within its substance, and freed in broth cultures, it injures selectively the mucous membrane of the stomach, producing hemorrhage, leukocytic infiltration and ulcer; hence location and growth of the living organisms in the mucous membrane of the stomach may be favored by this specific poison.

FOCI OF INFECTION

Realizing the importance of Rosenow's work, we have for many years paid particular attention in the Clinic to foci of infection in all gastroduodenal cases. While, undoubtedly, something has been accomplished, in curing and preventing the recurrence of ulcers by routine treatment of foci of infection, the clinical results are not as promising as we had hoped. Foci of infection should always be removed; however, there seems to be greater benefit in the cases of remote infection in inflammations of the urinary tract, than in cases of gastric and duodenal ulcer.

The ulcers produced in animals by bacteriologic experiments would, undoubtedly, under the proper conditions, become true chronic ulcers, but usually they are more like hemorrhagic spots, more superficial, and tend to heal quickly. Mann and Williamson have recently succeeded in producing experimentally, what appear to be true chronic ulcers in a series of dogs during a study of the influence of secretions of the stomach and duodenum on the jejunum. Grossly and microscopically the ulcers are essentially the same as the chronic gastric and duodenal ulcers in the human being. Both types can be excised and placed side by side, and it is not possible to distinguish between them. The essential factor in the production of the ulcers in dogs seems to be preventing the secretion from the liver, pancreas, and duodenum, from bathing the mucosa at the point at which the acid emerges. The operation performed by Mann and Williamson on these dogs

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consisted of section of the pylorus, closure of the duodenal end, section of the first portion of the jejunum, anastomosis of the distal end of the jejunum to the stomach, and anastomosis of the proximal end of the jejunum to the ileum; thus all the secretions pouring into the duodenum, flow into the ileum, while the contents of the stomach pass directly into the jejunum. These investigators have found that ulcer practically always develops following this procedure. Many of the ulcers perforate and cause the death of the dog. As further proof they have, on several occasions, reestablished the normal gastro-intestinal tract after the ulcer has developed, so that the secretions from the stomach and the contents of the duodenum flow normally. Under these conditions, the ulcers of the jejunum heal promptly.

Rosenow, working with Mann, has attempted to show that the ulcers which Mann produced by this re-arrangement of the physiology, were in reality the result of infection, and animals are being immunized with this ulcer streptococcus, and then operated on, after the plan of Mann and Williamson. The results of the immunization experiments indicate that streptococci from ulcer, even of different species, are closely related and probably specific for this disease, that a practical method for preserving specific anti-genetic power has been developed, and that active and passive immunization should prove helpful in the prevention and treatment of gastric and duodenal ulcers in man.

The practical application of the results of these investigations are being carried out in ulcer cases. The study of the bacteriology indicates a continued careful search and treatment of every source of infection and every infection in ulcer cases. Although the experiments of Mann, based essentially on physiologic principles, did not result in the production of ulcers of the stomach and duodenum, nevertheless, they show definitely the influence of unchanged gastric contents of the jejunum, and undoubtedly explain the etiology of jejunal ulcers after gastro-enterostomy. It seems to me that the experiments lend very strong evidence to a break in the normal physiology as a cause in the development of ulcers. This would indicate the continuation of careful medical and dietary management in these cases both before and after operation.

LOCATION OF ULCERS

One of the striking characteristics of ulcers of the stomach and duodenum is the regularity with which they are found at a specific point on the lesser curvature of the stomach and in the cap of the duodenum. Ulcers of both the stomach and the duodenum are found to be multiple much oftener than formerly, and the simultaneous occurrence of an ulcer in the stomach and duodenum is common. It may be said that nearly all gastric ulcers occur on the posterior aspect of the lesser curvature, and in the median gastric region; it is unusual to find them on the anterior surface of the stomach. The vessels in this part of the lesser curvature are end-vessels which may invite thrombosis and interfere with the ordinary healing because of insufficient collateral circulation. Most ulcers of the duodenum, whether they are of the duodenitis or true ulcer type, occur on the anterior surface about 1.7 cm. from the pylorus, closer to the upper than to the lower border.

CLINICAL MANIFESTATIONS

The clinical manifestations of ulcer are almost mysterious, especially in their early onset when the symptoms are present in certain seasons of the year only. It is difficult to explain just what takes place in the ulcer to cause this change in the symptoms. During the spring and fall, the patient may be suffering constantly in spite of the careful diet and management; between these seasons the symptoms subside, and, regardless of indiscretions, may not return. It is hardly conceivable that within this short time the ulcers could heal, and yet they certainly are inactive so far as producing symptoms is concerned. It is, therefore, obvious that treatment should be started in the late spring or late fall. It is well known that most patients with chronic dyspepsia do not have organic gastric disease, and that the dyspepsia of adults is more often the result of diseases of the gall bladder than of ulcers of the stomach or duodenum, and association of the two conditions must be kept in mind. The general clinical manifestations of ulcers are definite and clear cut, and an accurate diagnosis is usually made from a study of these signs. Laboratory examinations are becoming increasingly more valuable in the differential diagnosis.

TREATMENT

In view of the fact that dyspepsia is so often caused by factors other than organic lesions of the stomach or duodenum, it is important that an absolute diagnosis be made before treatment is undertaken. Much credit is due those who have carefully worked out a plan of medical régime in the treatment of these cases and a great deal has been accomplished by them. The more recent careful postmortem examinations reveal the fact that in many cases there are scars of healed ulcers in the duodenum and stomach when there had been little evidence of trouble during life, showing that these ulcers do heal spontaneously, and that some of them can certainly be made to heal by proper management. I doubt whether we are often justified in subjecting patients with gastric ulcer to any treatment but surgical removal. There is apparently no way of distinguishing between benign and malignant ulcers: on the other hand, all ulcers in the duodenum may be considered benign, and some of the earlier cases will respond to proper diet and general care.

Surgeons in this country were greatly interested last year in Professor Pfinster's views with regard to the treatment of ulcers of the stomach and duodenum. He advocates a radical operation in all cases, believing that jejunal ulcers are common following gastro-enterostomy alone, and that this secondary ulcer is the result of the irritating influence of the acid secreting glands on the mucosa of the jejunum. He believes that on this account the only rational procedure is to remove the pyloric half of the stomach in order to get rid of these glands. While this plan is definitely indicated in selected cases, it does not seem to me that it should be adopted as a matter of routine. I am convinced that secondary ulcers in the jejunum, do not occur as frequently as formerly, owing to improvements in the technic of gastro-enterostomy, and possibly also to management after the operation. Resection of the stomach will not be attended with perfect functional results in every case; a jejunal ulcer rarely develops after resection, but other mechanical interferences may keep the patient unhappy. Thus it would seem that as many unsatisfactory results follow the more radical procedure as follow gastro-enterostomy. The immediate result should be more favorable after gastro-enterostomy. Undoubtedly, cer-

tain patients have almost an idiosyncrasy for the development of jejunal ulcers, and if this could be recognized before operation, general results would be better and jejunal ulcer would be practically eliminated. Even now, this group of ulcer-forming patients, is less than 5 per cent of the whole number. Gastro-enterostomy might be said to be absolutely satisfactory, were it not for the occasional formation of an ulcer in the jejunum.

It is because of this development of jejunal ulcer in surgical treatment of ulcers of the stomach and duodenum that we are especially interested in the experimental ulcers which Mann has succeeded in producing in dogs, and which seem identical with those found in man. It seems clear that these ulcers are the result of secretions passing unchanged from the stomach to the jejunum; we may assume, therefore, that jejunal ulcer is due to this irritating influence of the gastric secretions, which in this particular group of cases, has not been influenced by the duodenal contents. If it were not for the neutralizing influence of the fluids of the duodenum, all gastro-enterostomized patients undoubtedly would develop ulcers of the jejunum. Diet and alkalization after gastro-enterostomy will not prevent the formation of ulcer in the jejunum. If there were some other way of reducing the irritation of the gastric secretions, or of increasing the neutralizing influence of the bile, pancreatic juice, or duodenal secretion, the question of jejunal ulcer might be solved.

Improvements in the performance of gastro-enterostomy, a better knowledge of the etiology of ulcer, and of the physiology of the stomach, duodenum, liver and pancreas, will do more to improve results of operation on gastric and duodenal ulcers than the adoption of a radical operation in all cases.

FELLOWSHIPS IN NEUROPSYCHIATRY

Five fellowships in neuropsychiatry are available in the Graduate School of Medicine of the University of Pennsylvania. These fellowships have been established for the period of three years from October 12, 1925, by the Commonwealth Fund of New York.

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Applications are invited for these fellowships and should be addressed to "Dean, Graduate School of Medicine, University of Pennsylvania, Philadelphia."

Fistulae of the Bladder*

BY CYRIL G. RICHARDS, M.D.,

Kenosha

Fistulae of the bladder have occupied the attention of medical men since the time of Hippocrates, who was the first to record a case of vesico-vaginal fistula. Because of the difficulty of repair, many types of operation have been devised; but it was not until 1852 that Hayward, of Boston, reported the first case in which treatment was successful and resulted in cure. He stated that he had operated on nine patients forty times. Senn also met with about the same experience, having operated on three patients forty times without success. Senn and Machenrodt, however, must be credited with developing a technique enabling the surgeon to repair vesical injury with greater facility than previously, especially in the inaccessible vesico-vaginal variety.

The types of vesical fistulae most commonly encountered are the vesico-vaginal and entero-vesical; several other less common combinations are utero-vesical, salpingo-vesical, and vesico-rectal fistulae.

VESICO-VAGINAL FISTULAE

Vesico-vaginal fistulae consist in a communication between the bladder and vagina, and may occur following surgery on the uterus, after prolonged and instrumental labor, and, within recent years, it has resulted from radium and cautery in the treatment of carcinoma of the cervix. The fibrosis resulting from the latter two methods render the operative technique of repair more difficult. The majority of vesico-vaginal fistulae can be cured with comparative facility, but there are cases which require greater surgical ingenuity, on account of the inaccessibility of the lesion and extensive loss of tissue. For these cases, many types of operation have been devised. Trendelenburg, in 1890, was the first to use the suprapubic route, and many others have since advocated his method; but on account of the greater possibility of infection by this approach, the vaginal route seems to be best suited to the greater percentage of cases.

The small type of fistula is best repaired by an incision through the vaginal mucosa extending completely around the fistulous opening. The

vaginal mucosa is dissected toward the opening in a circular manner and the dissection is carried deeper around the fistula, down to the mucosa of the bladder but not penetrating through it. In small fistulae the method of C. H. Mayo may be employed. A ligature carrier is passed into the bladder and through the fistula into the vagina. A suture is passed through both walls of the funnelled mucosa on each side of the ligature carrier. The two ends of silk suture are then threaded into the ligature carrier which is withdrawn by way of the bladder and urethra. Traction on the ends of the suture projecting from the urethra causes the fistulous tract to become inverted. As soon as the mucosa disappears, a circular suture of fine chromic catgut is applied, a little more traction is exerted on the ends of the long suture, and a second purse string suture of catgut is applied. The vaginal side is now closed by a circular suture of chromic catgut. By this technique the mucous surface is turned into the bladder.

TREATMENT OF INACCESSIBLE TYPE

The treatment of the inaccessible type of fistula is more complicated than that of the ordinary low sinus. Ward has laid down the four following points as essential to success:

1. Accessibility.
2. Free mobilization of the bladder.
3. Displacement downward of the bladder.
4. Correct suturing.

In order to obtain sufficient working exposure of the sinus, some type of paravaginal incision is made, either that of Schuchardt, recommended by Ward, or the lateral incision advocated by MacKenzie, which allows the cervix and fornix to be brought down into the field of operation. The cervix is then grasped and an antero-lateral incision is made surrounding the sinus. The vaginal wall is dissected freely away from the bladder wall so that the bladder lies loosely and can easily be inverted. The next step is the careful suturing of the edges of the fistula. With a small curved needle threaded with fine catgut these edges are caught and inverted into the bladder. Another layer or two of fine catgut suture may be employed

*Read before the 78th meeting of the State Medical Society of Wisconsin, Green Bay, August, 1924.

to reinforce the original bladder suture. The vaginal wall is then loosely sutured over with fine catgut. The important point in placing the sutures is that they should not be too tight, because many failures have rightly been attributed to the tearing out of the sutures. A retention allowed to remain for another four days.

A factor essential to success in the after-care of these patients is careful daily lavage, so carried out that the retention catheter is kept clean and free from deposit, but the bladder is never allowed to become fully distended. Chute has recommended maintaining the patient in the abdominal posture for several days. The retention catheter is removed in four or five days and the patient is instructed to void every hour. If there is any leakage of urine, the retention catheter is replaced and allowed to remain for another four days.

VESICO-SIGMOID FISTULAE

The next most common type of bladder fistula is that due to diverticulitis of the sigmoid, which is a well recognized condition today. The main point in diagnosis of this type of fistula is the passage of gas and fecal material per urethra. Although the patient may have experienced indefinite, lower abdominal symptoms for some time, onset is usually acute. The abdominal symptoms simulate acute appendicitis, except that the tenderness and spasm are on the left side. The mimicry of the symptoms of appendicitis is so striking that this condition has sometimes been spoken of as left-sided appendicitis. There is localized peritonitis and the intestine becomes adherent, usually to the left side of the bladder; in course of time it perforates the viscus, thus forming a communication between the sigmoid and bladder. The patient experiences the passing of gas and fecal material per urethra and complains of marked burning and frequency on urination.

Cystoscopic examination reveals a diffuse cystitis and a funnel shaped depression, usually on the left posterior wall of the bladder, marking the site of the perforation. As patients are very sick at onset, the peritonitis must be allowed to subside before any operative measures are attempted. A colostomy may then be performed so that the fecal stream may temporarily be diverted. Following this procedure these fistulae sometimes close of themselves. After a period of three or four months, depending on the patient's condition, the diverticulum may be resected, or the colostomy may be closed.

COMPARATIVELY RARE TYPES OF FISTULAE

Fistulous openings between the bladder and parts of the intestine other than the sigmoid are but infrequently reported. Judd and Rankin reported two cases of vesico-appendiceal fistulae which were the result of old appendiceal abscesses. In one case the diagnosis was made on exploring the bladder for an ulcer, which was found to communicate with the bowel close to the ileocecal valve.

Recto-vesical fistulae are most commonly the result of carcinomatous conditions, either by extension from the bladder to rectum, or vice versa. As these cases are always hopeless, treatment is chiefly symptomatic.

Utero-vesical fistulae are rare, but occasionally one finds a case reported in the literature. They are usually due to trauma at operation or childbirth.

When the bladder sphincter is damaged beyond the possibility of resuming its function and benefit has not been obtained by any operative measures, the substitution of the anal for the vesical sphincter has been recommended by Peterson. He has collected 41 such cases in which the results were satisfactory, several patients enjoying comparative health for many years. The rectum can be made to act as a urinary reservoir by diverting the stream into the rectum and closing the vaginal orifice. Other operations may be performed, such as transplantation of the ureters, either singly, or according to the method of Maydl; that is, by implanting the vesical flap containing the trigone and both ureters into the sigmoid.

CASES OF VESICO-VAGINAL FISTULA

CASE 1. A young woman, 30 years of age, who had previously been in good health, came to the hospital on account of her third pregnancy. She was in labor several hours and forceps were applied. Several days later dribbling of urine was noted and on examination an opening was found in the anterior fornix, so large that a finger could be inserted through it into the bladder. All the urine escaped through this opening.

Several weeks later, after all possible allowance had been made for healing to take place, the vaginal wall was dissected from the bladder wall, the edges inverted and repair effected. A Pezzer catheter was inserted and the bladder was lavaged daily. At the end of five days the catheter was removed, but as the opening had not completely closed, a slight amount of urine still escaped. The retention catheter was replaced and after a period of four days, it was again removed. By this time there was no leakage of urine, and when the patient left the hospital some weeks later the fistula had entirely closed.

CASE 2. A woman, 45 years of age, developed a vesico-vaginal fistula following a total hysterectomy for fibroids. The original surgeon had made several unsuccessful attempts to close it.

On account of the inaccessibility of the fistula, the para-

vaginal incisions recommended by MacKenzie were made, and gave everything to be desired in the way of exposure. In spite of careful suturing, the patient suffered a relapse which, I believe, was due to failure to remove all the scar tissue, which had followed previous efforts to close the fistula by fulguration.

Fortunately, the original surgeon redeemed himself by operating on the patient again and this time effected a successful repair.

CASE 3. A woman, 45 years of age, had had a total hysterectomy for fibroids. Several days following operation urinary leakage had occurred and two attempts had been made to close the opening.

Cystoscopic examination revealed a small depression at the right base of the bladder through which a ureteral catheter was passed into the vagina.

After a few days of preliminary treatment of the bladder, the patient was operated on and the fistula was closed by dissecting the vaginal wall away from the bladder, excising the fistulous tract, inverting the edges by two layers of interrupted sutures, and suturing the vaginal wall. The fistula healed and the patient left the hospital cured within two weeks.

CASES OF VESICO-SIGMOID FISTULAE

CASE 1. A male, aged 48 years, was first examined at the Clinic March, 1923. The family history was negative. The past history consisted in typhoid fever at 19 years, appendectomy for a ruptured appendix at 26, influenza at 27 and a mild attack again during the epidemic of 1918; and an attack of ptomaine poisoning at 38. The patient's habits and mode of life had been good.

The symptoms of which the patient complained had been present for three or four years and consisted in distress after meals, belching of gas, and attacks of abdominal soreness which were relieved by cathartics and enemas. There was no jaundice or history of gallbladder disease. The urine at times contained a small trace of sugar, but was otherwise negative.

Physical examination revealed infected teeth and tenderness on deep pressure over the left lower quadrant. The urine was negative. The blood pressure was 140 systolic, and 100 diastolic. X-ray examination of the stomach was negative, but an X-ray of the colon showed diverticulitis of the transverse colon and sigmoid, and constriction of the proximal portion of the sigmoid flexure.

Diagnosis was made of diverticulitis of the sigmoid.

Under regulation of diet the patient improved until the early part of January, 1924, when he was taken acutely ill with chills, marked abdominal soreness, constipation, and tenderness in the left lower quadrant. His fever continued for about a week, but the abdominal soreness disappeared. Nearly ten days later gas and fecal material were passed from the bladder.

As soon as he had recovered sufficiently from this attack, a colostomy was made. For a few days following operation he was critically ill, but gradually improved and now enjoys the best health he has had for some years. Neither gas nor fecal material has been passed per urethra since the colostomy was made, and no urinary symptoms are present. The procedure to be followed in the future treatment of this case is problematical.

CASE 2. A male, aged 64 years, was first examined at this Clinic November 29, 1923. The family history was negative. At 30 years of age the patient had had typhoid fever and acute rheumatism. Twenty-five years ago he had had an attack of gastritis, tenderness in the epigastrium, and belching of gas which had been relieved by a stomach tube when he had subsequent, similar attacks. For some time he had suffered alternately with constipation and diarrhea; the stools had been thin and poorly formed. About one year before, he had had "bladder trouble" with desire to move the bowels at each urination. It had been necessary for him to get up at night some thirty times. Soon after the onset of these symptoms he had begun to pass gas per urethra and had noticed a thick sediment in the urine. He had not had any attacks

of retention of urine or pain attributable to the kidneys. Loss in weight had amounted to 30 pounds.

Physical examination revealed an old man, fairly well developed and nourished. The respiratory, circulatory, and neurological systems were normal, and examination of the abdomen was negative. The systolic blood pressure was 140, the diastolic 80. Both inguinal canals gave impulse on coughing. The prostate was benign and enlarged twice the normal size. The urine was very cloudy, with a thick sediment after standing; this contained particles suggesting fecal material. Residual urine amounted to 15 c.c. Laboratory examination showed albumen 2, sugar 0, and pus 4. On phenolsulphonphthalein test of the renal function, 60 per cent of the dye returned in 2 hours and 15 minutes. Blood urea was 41.5 mg. per 100 c.c. X-ray of the kidneys, ureters, and bladder was negative.

On cystoscopic examination the capacity of the bladder was found to be 300 c.c. There were 15 c.c. residual urine. The cystoscope met with resistance in the prostatic urethra. The mucosa of the bladder showed a moderate degree of cystitis, especially about the posterior lateral wall where there was an area of bullous edema surrounding a funnel shaped depression which appeared to be a fistulous opening. No gas was seen to escape from this opening. As both ureteral orifices were observed frequently to spurt clear urine, the ureters were not catheterized.

Diagnosis was made of diverticulitis of the sigmoid with perforation into the bladder, and benign hypertrophy of the prostate.

Under ether anesthesia a left lower rectus incision was made and, as was anticipated, all the structures in the pelvis were found to be very adherent. I succeeded in freeing about 30 cm. of small intestine, all of which was firmly adherent. During the separation the sigmoid was opened three times, but was immediately closed.

Convalescence was uneventful; the drains were removed on the fifth day and the wound healed promptly. For about three months after operation the patient continued to improve; he did not pass any gas per urethra and the bowels moved regularly. I did not see him again until two months ago, when, after a transcontinental trip, he began to suffer with colicky abdominal pains and distension; in fact, he complained of all the symptoms of incomplete, low obstruction. I believe a colostomy is indicated at this time, or soon complete obstruction will occur.

CONCLUSIONS

In vesico-vaginal types of fistula, operation by the vaginal route seems to be the method of choice because of the facility with which repair may be effected and the lower mortality of this procedure as compared with the suprapubic operation.

Success depends on the following points: (1) Adequate exposure, which is obtained by making either of the paravaginal incisions; (2) dissection of the fistulous tract with all surrounding scar tissue; (3) inversion of the fistulous edges; (4) careful placing of the sutures, avoiding undue tension, and (5) the postoperative use of a retention catheter.

Enterovesical fistulae, if due to sigmoid diverticulitis, first require a colostomy to relieve the irritation due to the fecal stream and, after the inflammatory reaction in the pelvis has subsided, resection of the diverticulum.

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DISCUSSION

CHAIRMAN J. R. MINAHAN: I have operated on quite a number of these cases, and I don't think the operation is much harder than operations in other parts of the body if you get your field right, but the great thing is drainage. I have put in my sutures when I thought I had them in fine and they have held, and I have put in my sutures when I thought they were very poor from the position of them, up in the cervix—sometimes it happens they are very nasty things to handle—but they have all held and I attribute my success in those cases to drainage.

Don't let that bladder distend a particle; if you do, you will fail no matter how you suture. In those cases of vesical vaginal fistula, we put in a retention catheter and turn the patient on her stomach and keep

her there a week; if no urine comes through in that time, we keep in the retention catheter and let her turn back. Why it is successful is that you have brought your wound together and you have turned your patient over so that your wound is up and you put in a retention catheter so that the water is all drained out without a particle of distention on the stitches. I have seen a great many of these patients every hour or every two hours, and you will find that the percentage of failures is very large. Where you get perfect drainage, why shouldn't a wound in the vaginal wall heal easily? What is the reason? There is only one reason and that is the bladder filling with water. We have a water bag for the purpose of turning them over; it is a very hard position for a patient to lie on the stomach all the time. We have the head and the abdomen a little higher than the hips; it is on a water bed and they are quite comfortable. Then you have that retention catheter draining out. You haven't at any time a teaspoonful of urine in that bladder and in that case I don't see any reason why we shouldn't get those all healed the first time.

Is there anybody else?

QUESTION: What suturing material do you use?

CHAIRMAN MINAHAN: Chromicized catgut. I don't use linen or silkworm-gut, I do the whole operation with chromicized catgut. I use fine at first. I always dissect the bladder away from the vagina and close the bladder with two or three rows of suture and then close the vagina the same so that when you put your finger in the vagina where your fistula was there is a little elevation; the sutures are up high, no depression. If you bring your sutures in in such a manner, when you examine it, there is a high ridge sticking up probably a quarter of an inch or half an inch right at the place where this was.

DR. SMITH: Mr. Chairman, before adjourning I think we ought to extend a vote of thanks to the men of Green Bay who have so royally entertained us. It seems to me not one single detail has been omitted. I think we would be very ungrateful if we adjourned without extending a rising vote of thanks to the men of Green Bay. I so move.

The motion was seconded and carried with a rising vote.

Ureteral Stricture*

BY E. A. FLETCHER, M.D., W. M. KEARNS, M.D., AND W. A. LIEBELER, M.D.,

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During the past two decades the anatomy, physiology, and pathology of the ureter have been carefully studied.

It is surprising, on first thought, that this small tube should have received so much attention. It is only when we bear in mind its relation to renal

pathology that the importance of these studies becomes apparent.

HISTORICAL

In 1910, Bottomley¹ was able to collect reports of only 56 congenital ureteral strictures, none of which were diagnosed before operation or autopsy. While hydronephrosis was the usual sequel, in a few primary renal atrophy occurred. Some of these cases had been wrongly diagnosed and oper-

*Read before the Milwaukee Academy of Medicine, Nov. 25, 1924.

ated upon as volvulus, intussusception, ovarian cysts, etc. That all of these cases were congenital and none acquired has been questioned.

In 1913, Desnos² in Paris reported 3 traumatic ureteral strictures, cured by intermittent and continuous dilatation. One patient was well two years after the last treatment and one was well four years after treatment. Each patient received six treatments. Desnos says it is not possible to establish an exact symptomatology of ureteral strictures, as they are silent in themselves and are only manifested by the complications which they produce. In concluding his article he says ureteral strictures do exist but they are generally due to the passage of a stone or to foyers of inflammation in the ureter, and that a lesion may remain silent for a long time and then produce symptoms which are not pathognomonic.

In 1915, Hunner³ reported his first group of 50 acquired inflammatory ureteral strictures and this group of cases has now grown to over two thousand. That they occur as frequently as is maintained by Hunner has been and is still doubted by some urologists. That Hunner has done a signal service in persistently calling attention to ureteral stricture is admitted. He says that there is generally a primary focus of infection outside of the urinary tract and he believes that these strictures are always bi-lateral and usually single, most of them occurring in the lower third of the ureter. In a recent article he⁴ states "ureteral stricture will eventually be recognized as one of the important lesions of the abdomen, (a) because of its important bearing on the pathology of the upper urinary tract; (b) because of its direct influence on the patient's well-being, and (c) because of the indirect morbidity to which it gives rise through mistaken diagnoses and treatment." It frequently imitates many abdominal conditions and consequently, unless recognized often leads to much fruitless surgery.

Among numerous recent publications, those of Goldstein,⁵ Herbst,⁶ Crowell,⁷ Walther,⁸ Rathbun,⁹ Morton¹⁰ and Keyes¹¹ attest to the growing acceptance of ureteral stricture work. It now commands the interest of all branches of the profession.

A review of the ureteral stricture cases seen during the past eighteen months on the urological service of the Milwaukee Hospital, is timely. Only acquired ureteral strictures which develop as

the end result of non-specific inflammation, and not tuberculous or malignant strictures, angulations, or congenital narrowings and valves are considered. Of the 338 patients examined there were 31 cases of stricture, over nine per cent, about equally distributed between men and women. No doubt some cases of stricture were overlooked, as many patients were seen but once, and were not examined with the wax bulb or uretero-pyelography, so the incidence in reality was probably higher. If stricture is looked for it will be found much more frequently than formerly.

ETIOLOGY AND PATHOLOGY

Distant foci of infection no doubt, play the leading part in the etiology. In this series 100 per cent had demonstrable foci, the teeth being the chief offenders. In some cases with foci of infection remaining, stricture symptoms recur after dilatations until the foci are removed. This is substantial proof of their etiological significance. The infection is probably carried to the ureteral wall in the same manner as it reaches the joints or heart valves. Renal infections occur in a similar way and secondarily affect the ureter. Calculi may be responsible for stricture formation.

As most all strictures are located in the lower third of the ureter, inflammatory processes in proximal organs such as the cervix and adnexa in the female and of the prostate and seminal vesicles in the male and the sigmoid on the left and retrocecal appendix on the right in both sexes, not infrequently are incriminated. Trauma of labor and gynecological operations may be a factor in some patients. Accidents are rarely the cause as the ureter is well protected. Many of the conditions of the upper urinary tract are secondary to stricture, such as stone in the ureter and kidney, hydronephrosis, pyelitis, and pyonephrosis.

The pathological process consists in an inflammatory infiltration of the ureteral wall, followed by fibrosis and contraction with narrowing of the lumen. The pathological autopsy evidence has not been abundant because there are few opportunities to dissect the ureter in these cases. The literature, however, is gradually accumulating with the results of thorough investigations of specimens.

SYMPTOMS

Pain is the most common symptom. It occurred in 85 per cent of the cases in this series. Hunner³ remarks that "to chart the pain would require a

chart of the human frame extending from the diaphragm to the ankles—the most deeply shaded portion of this chart would center in the local area of ureteral inflammation, or in other words in the broad ligament region deep in the pelvis.” Kidney pain is next the most common type. However, the true seat of the trouble is often overlooked because of burning sensations and areas of hyperaesthesia in the groin, bladder, urethra, penis, and inner thigh, as well as epigastric, sacroiliac, and sciatic leg pains. Typical ureteral colic, simulating stone, associated with nausea and vomiting and requiring morphine, is not uncommon. It occurred in 17 cases. Frequency and ardor are often present. Gross hematuria is apt to occur when nephritis develops. The urine may be clear and even microscopically negative. More often it contains some pus or red blood cells. Milder gastro-intestinal symptoms as nausea, anorexia, diarrhea, and flatulence are quite common. Many patients have lost weight or have been under weight for a long time as evidenced by the steady gain in body weight while under treatment. Various mental symptoms, hysterical attacks and states of depression may accompany the periods of stasis in the upper urinary tract. Low grade fever sometimes persists in the infected cases in spite of palliative medical treatment, until better drainage is established by dilatation. The varied symptoms noted should be kept in mind when making the diagnosis of appendicitis, gall bladder disease and other less popular diagnoses. Some of these patients have previously had all sorts of medical treatment and from one to four operations, all to no avail.

DIAGNOSIS

The diagnosis is usually simple if the proper methods of investigation are utilized. In some cases the history and complaint give a strong lead to a diagnosis; in the great majority, complete urological examination elicits stricture, while in a few the nature of obstruction remains in doubt even after one or two examinations. The diagnosis is usually made from a combination of the following findings:

1. *History* of renal or abdominal pain, often referred to the ureter and genitalia, with or without urinary symptoms.

2. *Ureteropyelogram* which shows a constriction with dilatation above. This is the most reliable finding and was positive in all cases in which

it was carried out. The ureteral filling is more important than the pelvic filling in the early cases, as the pelvis may not show any changes. In the advanced cases, however, all stages of hydronephrosis are represented.

3. *The pelvic capacity* in the 22 cases in which it was measured was increased above 15 c.c. in 8 or 37 per cent. The smallest pelvis was 9 c.c. and the largest were 2 over 50 c.c. The average was 17 c.c.

4. *The wax bulb “hang”* is a characteristic feel which the cystoscopist experiences when, as he withdraws the wax bulb from the ureter it becomes engaged in the strictured area and there is resistance to its passage; then a stronger pull causes it to slip past the obstruction. A visible tug on the ureter can also be seen through the cystoscope. This sign is pathognomonic of stricture and is used extensively by Hunner, who manipulates it through the open Kelly endoscope. He regards it as the most important sign. It cannot be used in the tight stricture cases and is not as practically managed through the closed lens type of cystoscopes which must be used in the male and are now much more popular for work in both sexes. It, however, is a valuable instrument in the diagnosis of stricture and is frequently necessary to clinch the diagnosis.



Figure 1. Case No. 22. Shows constriction, which wax bulb detected at 9 cm. from the bladder, with dilatation above. Pelvic capacity 16 cc. Patient had appendectomy 6 years before without relief. Three dilatations relieved patient of pain.

5. *Reaction to the ordinary ureter catheterization* with the regular non-bulb catheters is often suggestive of stricture. Severe reaction immediately following is characteristic and is caused by swelling incident to instrumentation bringing about obstruction in the narrowed area. On the other hand subsequent relief from symptoms by this examination, lasting over a considerable period of time, is also the rule.

The first step in the routine examination consists in an X-ray of the kidneys, ureters and bladder. The cystoscope is then inserted and the bladder inspected with the observation telescope. This completed, the catheterizing telescope carrying two No. 6 X-ray catheters is inserted and the ureters catheterized, separated urine collected and functional tests performed. If stone permeable to X-ray is suspected or a shadow is present in the ureteral region, a wax-tip X-ray catheter is passed. Occasionally a double exposed film with a shift of the X-ray tube is made, to determine exact location of shadow in relation to the ureter. At times the only instrument which passes is a small bougie. Rarely is a stricture impermeable. The ready passage of No. 6 catheters to the kidney does not exclude stricture and this point must be constantly



Figure 2. Case No. 27. Shows dilated ureter. Pelvic capacity 22 cc. Patient was brought into the hospital for an emergency appendectomy. Preoperative urine specimen showed gross hematuria. After two dilatations pain and hematuria disappeared.



Figure 3. Case No. 2. Stricture 6 cm. from the bladder with dilatation above. Pelvic capacity 17 cc. There is also a stricture on the right side. Patient had an appendectomy 8 months ago without relief.

borne in mind. Large calibre strictures produce symptoms and are only detected with the wax bulb and ureteropyelography. The functional tests finished, the table is placed in the Trendelenberg position and a pyelogram done on the suspected side—never on the two sides at one sitting. Sodium iodide 15 per cent is allowed to enter the pelvis slowly by the gravity method, avoiding overdistension. The first complaint of discomfort in the kidney region signals the full pelvis and the flow of solution is stopped. An exposure is made in this position. The patient is immediately placed in the upright position, the catheter slowly withdrawn, meantime filling the ureter with iodide solution. A second exposure is then made. The change of position demonstrates the emptying power of the pelvis and ureter. It also shows ptosis and torsion of the kidney as well as angulation and kinking of the ureter.

It has been a mooted question whether the constrictions with dilatations above occurring in the ureteropyelograms were really pathological dilatations or peristaltic waves. If constriction and dilatation occur at the same level on successive films and also correspond to the level of the

"hang" obtained with the wax-bulb there can be no doubt in regard to their identity. Moreover the dilatations in this series ranged in diameter from 9 to 25 mm. at their maximal part. Goldstein¹² studied more than 50 normal ureters with fractional ureteropyelography and found the calibre of the ureter quite constant; it varied between $2\frac{1}{2}$ and $3\frac{3}{4}$ mm. in its largest diameter. Poirier¹³ gives the largest diameter of the ureter as 6 mm. and Jackson¹⁴ in Morris Anatomy gives the diameter of the distended ureter as 5 to 6 mm. In regard to spasm, it seems improbable that the ureter is capable of producing, by contraction of its circular muscle fibres, at any one point a long standing stubborn obstruction such as resists the passage of stiff bougies. The obstruction always occurs at the same level at each sitting and allows only a gradual increase in the size of the instrument passed and is unaffected by the preliminary administration of atropine. In describing the anatomy of the ureter Kelly and Birnam¹⁵ state that, "In most cases, however, the only ring muscle which appears at all capable of closing the tube is at the junction of the renal pelvis and ureter, the rest being too delicate in structure and too much stretched by long distension of the canal."

As space will not permit a detailed discussion of the differential diagnosis the important conditions to be differentiated will be mentioned.

1. Those of Genito Urinary System.
 - A. Congenital ureteral stricture.
 - B. Tuberculosis ureteral stricture.
 - C. Renal and ureteral calculi.
 - D. Pyelitis without stricture.
2. Extra-urinary conditions.
 - A. Appendicitis.
 - B. Gall bladder disease.
 - C. Gastric and duodenal ulcer.
 - D. Disease of the adnexa.
 - E. Sacro-iliac disease.

While ureteral stricture has been the basis for many symptoms it has been disguised by them to such an extent as to go on without being discovered and treatment directed to associated cystitis, pyelitis, pyonephrosis, floating kidney, hydronephrosis, stone in the ureter, and chronic Bright's disease. Outside of the urinary tract pelvic inflammatory conditions, ovarian disease, disorders of the gastro-intestinal tract, sacro-iliac ailments, and mental complaints have all attracted the atten-

tion of the physician and treatment was naturally symptomatic.

The diagnosis requires a careful history and general examination, close team-work by the branches of the profession and the application especially of laboratory tests and urological investigation.

TREATMENT

Treatment is directed to the relief of symptoms and this is logically done (1) by the removal of foci of infection, (2) dilatation of the strictures present, (3) operative treatment, when necessary for stone and advanced disease of the kidney.

Dilatation is brought about in different ways. In those cases that are operated on with a pyelotomy or pyelo-nephrotomy as large an instrument as possible is passed from the kidney to the bladder at operation—so-called retrograde dilatation. The non-operative cases are treated through the cystoscope. In the very tight cases a small bougie is passed and left in position for 5 to 10 minutes. At each successive treatment a larger size bougie is inserted, until a catheter will pass. The catheter is left in from 2 to 24 hours, depending on the ability of the patient to endure it. The treatments are given at intervals of ten days to two weeks unless the reaction is too severe or the patient is unable to stand such frequent instrumentation. Only one side is treated at a sitting. The dilatation is carried on with larger conical bougies or Garceau catheters until the ureter admits a No. 15 or No. 16 instrument. Certain of the larger calibre strictures in irritable patients are treated with the wax-bulb, sizes reaching No. 16. This instrument is used either through the Kelly endoscope or Brown-Buergor lens system cystoscope. For the introduction of the larger instruments the new McCarthy cystoendoscope has proved a very satisfactory aid. In the female, urethral stricture is a common accompaniment and is dilated to size No. 30.

RESULTS

The time elapsed in these cases is too short to determine the permanency of results. The prompt relief obtained is most gratifying and voices best the importance of this work. Not all cases obtained their full benefit because of the few treatments received, but all who received dilatation



Figure 4. Case No. 11. Dense stricture in lower right ureter with diverticulum above and long dilatation of mid-ureter. Pelvic capacity 26 cc. There was also a tight stricture on the left side and a badly infected urine. Six dilatations caused urine to clear up and pain to disappear. The patient has gained 15 pounds in the last 4 months.



Figure 6. Shows a stricture in the lower third of right ureter with dilatation above. Patient has had recurrent attacks of right sided pain and cystitis for ten years. Appendectomy eight years ago and sacroilliac appliances for past three years without relief. Dr. W. F. Braeseh of the Mayo Clinic has since examined this patient and concurs in the diagnosis.



Figure 5. Stricture of left ureter 3 cm. from the bladder. Double exposed film on the left of illustration identifies shadow as stone in the lower ureter. Ureteropyelography on the right of illustration shows stone obscured by inclusion in filling of dilatation above stricture. The stone was passed after the stricture was dilated to size No. 12. French.

were improved to a certain extent, some were completely cured. The discomfort of instrumentation and reaction following is the greatest obstacle to completing the full course of dilatation. Two or three treatments in several cases brought about such excellent results that the patients decided against repeating the ordeal. Obstinate infections of the urinary tract cleared up, stones passed, patients gained weight, vague symptoms and pains rarely associated with pathology in the urinary tract disappeared.

TABLE 1. SUMMARY.
31 Cases of Ureteral Stricture
Females 16. Males 15.

Foci of infection were present in.....	100%
Kidney and ureteral pain were present in.....	85%
Urinary symptoms were the complaint in.....	56%
A clear urine in.....	26%
Former operations without relief in.....	44%
Renal or ureteral calculi occurred in.....	29%
Bilateral stricture found in.....	29%
The area from 2 cm. to 10 cm. from uretero-vesicle orifice includes 82% of the obstructions. 6% were above, 6% were below.	
Previous duration of symptoms averaged 4 years ranging from 6 months to 13 years.	
The age period between 20 and 40 years included 21 patients. 5 were under 20 years and 5 were over 40 years.	
The wax bulb was employed in 12 cases and ureteropyelography in 22. Both gave positive findings consistently.	
Average pelvic capacity was 17 cc.—ranging from 9 cc. to 50 cc.	
Average number of treatments was 4—ranging from 1 to 7.	
All cases treated with dilatation were improved.	

CONCLUSIONS

In conclusion allow us to reiterate that ureteral stricture has a relatively high incidence. Its discovery depends entirely on the attitude of the urologist, who must search if he will find. There is a strikingly frequent association of foci of infection. The symptoms are often misleading—a negative urine and preponderance of gastro-intestinal complaint is not uncommon. In ureteral stricture work the urologist offers to the surgeon and the internist an ever welcome haven for his perplexing cases in diagnosis as well as those in which surgery or other forms of therapy have failed. By the ready cooperation of all branches of our practice early recognition is possible and many years of suffering and invalidism will be avoided by simple dilatation. The sum total of our satisfied patients will be increased.

CASE REPORTS

CASE 5. Mrs. S. P. Referred by Dr. C. A. Evans.

A married woman, 40 years of age, complains of right lumbar pain which radiates to the bladder, also slight left lumbar pain and urinary frequency.

The patient has had tonsillitis since childhood and quinsy at 20 years. Diphtheria at 34 years.

The present illness began 15 years ago with dull pain in right lumbar and inguinal regions, associated with frequency and burning on urination. Pain subsided at times but was always aggravated by menstruation and the up-

right posture—the urinary symptoms occurred only occasionally and were slight. During the past 10 years there has been some similar complaint on the left side. Patient had leucorrhœa for a number of years until five years ago, when she was operated on and the following procedures carried out: Perineorrhaphy, trachelorrhaphy, a Gilliam suspension of the uterus, and appendectomy. At this operation the gall bladder was found to contain stones. Two weeks later a cholecystectomy was done. The hospital record at this time shows the urine contained a small amount of pus. There was no relief from the symptoms except leucorrhœa. During the past five years the patient has emptied 94 boxes containing nearly 2,000 Harlem Oil capsules—taken one a day.

The patient was first seen July 18, 1924, and during the previous two months had suffered more severely with frequent urination and pain which radiated from the right kidney to the bladder. There was nausea, occasional vomiting and much flatulence. The urine was clear and contained no pus or albumen and only an occasional red blood cell and an occasional leucocyte in the sediment. There were infected tonsils, teeth, and pyorrhea.

The right kidney was tender and slightly movable. There was tenderness over both mid-ureters.

Cystoscopic examination demonstrated a trabeculated bladder. The right ureter orifice was slightly hyperemic and oedematous. No. 5 catheters passed readily to each kidney pelvis. The functional tests showed a clear urine of equal concentration from either kidney. A pyelogram on the right side showed a pelvic capacity of 15 cc. There was an area of narrowing just below the level of the sacro-iliac joint with dilatation above.

Following this examination the patient states that the vomiting ceased, the appetite and digestion improved, frequency diminished, and pain practically disappeared. This reaction is very suggestive of ureter stricture. Two weeks later, August 2, 1924, the patient was cystoscoped again. A No. 8 wax-bulb developed a "hang" in the right ureter at 8 cm. from the ureteral orifice and again at 2 cm. A No. 7 catheter was passed to right kidney pelvis and left in place six hours. Two weeks later, August 15, 1924, the patient appeared for the third sitting, stating that she was much improved and able to work considerably without pain. The left ureter was explored and a No. 9 wax-bulb developed a "hang" 5 cm. from the orifice. A No. 8 catheter was passed 15 cm. up the right ureter and left in place six hours. Ten days ago the patient had all teeth removed. This operation has caused some exacerbation of the left sided pain. The general condition of the patient has improved and she notices a definite relief from pain since dilatation of the ureters was instituted.

CASE 6. Miss A. A. Referred by Dr. C. A. Evans.

A girl 19 years of age complained of pain in the left inguinal region, occasionally radiating to left kidney, associated with nausea, vomiting and hysterical attacks.

The patient had influenza at 13 years, tonsillitis since babyhood and a tonsillectomy at 14 years.

Dr. Evans strongly suspected ureteral stricture in this case and referred her for examination on August 4, 1924. Ten years before she had pain in the lower left abdomen, which lasted about a year. It recurred two years ago and has been present daily since, accompanied by nausea and flatulence and aggravated by exercise and menstruation. Occasionally the pain became severe and colicky, radiated to kidney and caused vomiting, nervousness, tremor and hysterical breakdown. There were no bladder symptoms. The urine showed a small amount of pus and bacilli coli. There was tenderness on deep pressure over both lower ureters.

No. 5 catheters passed readily to the kidney pelvis, the left bearing a wax tip which showed no scratch on removal. The function and character of urine on the two sides were normal. A No. 7½ wax-bulb developed a "hang" 3 cm. from bladder and produced a visible tug on the ureter. Ureteropyelogram on the left side showed a pelvic capacity of 20 cc., a narrowing in the lower third with dilatation above.

On August 14, 1924, ten days later, a No. 8 wax-bulb was passed to left kidney pelvis and developed a very

definite "hang" at 3 cm. from bladder. A No. 9 Garceau catheter was inserted for 10 cm. and left in place one hour. On August 26, 1924, twelve days later, the patient reported free from pain, even during a menstrual period, when it was formerly severe. A No. 10 Garceau was passed to left kidney and remained in place 12 hours. September 15, 1924, the patient was free from all pain, nervousness, and gastro-intestinal symptoms and had gained 8½ pounds in weight.

CASE 12. A young married woman, referred by Dr. R. G. Sayle, complained of pain in the right lumbar region just below the costal arch, which radiated to the bladder and was exaggerated by exertion. She had frequency of urination, twice nocturnally and every two hours diurnally.

An appendectomy was done 6 years ago with considerable pain since. A tonsilectomy was performed one year ago for long standing tonsillitis.

Physical examination revealed several infected teeth and tenderness on deep palpation of both ureters and kidneys. The urine showed only a few leucocytes, red blood cells and bacilli coli.

Patient stated she had paroxysms of pain for 10 years, which grew steadily worse.

The first ureter catheterization on July 30, 1923, elicited an obstruction in the right ureter 4 cm. from the bladder, which would not admit a No. 5 catheter. On the left a No. 3 bougie was passed through obstructions 3 cm. and 12 cm. from the bladder, which were impermeable to larger instruments. On August 4, 1923, a No. 5 bougie was passed to right kidney pelvis, followed by colic and hematuria for 2 days. On August 15, 1923, a No. 11 stiff, conical bougie was passed through right ureter and received no scratch. A No. 9 metal bulb passed through the obstruction to the right kidney. On August 25, 1923, a No. 11 stiff, conical bougie was passed to the right kidney pelvis. On September 7, 1923, a No. 9 conical bougie was passed to left kidney pelvis with difficulty. On September 22, 1923, a No. 12 Garceau catheter passed to right kidney pelvis, the urine from this side was functionally about equal to the other side. It showed a good urea concentration and only an occasional leucocyte. The last sitting was on September 29, 1923, when a No. 10 catheter was passed through the left ureter. This course of treatment afforded complete relief of symptoms and return to excellent health.

CASE 32. A young woman of 35 years of age referred by Dr. F. A. Forsbeck. This is an earlier record but is inserted in this review because it illustrates so well a typical case; one which has gone to the extremes of suffering in spite of being a graduate nurse and later a war nurse with plenty of consultation with reputable doctors.

In 1904 she had an appendectomy done for right sided pain with no relief. In 1905 the pain persisted and another physician ascribed split muscles resulting from the operation as the cause. A belt was applied and worn day and night for 2 years with no lessening of the pain. In 1913 she had diphtheria. In 1914 she experienced several severe attacks of right-sided colic—the last one lasted 15 hours and ended with the passage of a small stone. An infected tooth root was amputated in 1917 and a little later the tooth had to be pulled. This was followed by extensive infection involving the lower jaw and tongue. In 1918 she had multiple arthritis following army inoculations. For nearly a year following this the patient was in fair health, when the pains in the right side recurred, accompanied by nausea, dizziness, slight fever and occasional frequency of urination.

The patient was first seen in August, 1919. She had been vomiting for 4 weeks and had lost 24 pounds in weight. An X-ray of the kidneys, ureters and bladder showed no stone or other pathology. The total phenolsulphonethalein test revealed an excretion of 72% in 2 hours. The urine showed a small amount of pus and a few red blood cells. The ureters were catheterized with No. 6 catheters. The functional tests showed normal urine on both sides and the right kidney to be only one-half as efficient as the left. Following this examination the vomiting ceased and the pain was lessened. Aside from the diminished function on the right side no pathology was found. A diseased gall bladder was suspected and an exploratory operation performed, but no pathology found. Three weeks

later, September 10, 1919, a size 10½ wax-bulb developed a "hang" in the right ureter 7 cm. from the bladder. The patient then had ten dilatations during the next four months and gained rapidly. On February 3, 1920, the blood urea was 23 mgs. per 100 cc. and the patient was well and at work. She has had a dilatation every six months since and was free from pain when last heard from in September, 1924.

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The Value of the Pyelogram*

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With the coming of the distinctly specialized urologist equipped and trained as he was to the visual examination of the bladder; to the exact division of urine into that coming from the right and that coming from the left kidney by the passage of ureteral catheters; and finally to the rather exact estimation of the functional ability of each kidney separately by means of these ureteral catheters, an extremely long step was taken toward perfection in the diagnosis of renal disease.

In spite of this enormous stride, considerable room still remained for additional evidence to help clear up the innumerable questions in kidney diagnosis. In a case in which the divided renal function proved one kidney half destroyed, what was the actual underlying pathology and should the kidney be removed or might it not be saved? In a case in which one of the ureteral catheters gave a pusy urine that showed no tubercle bacilli, was it tuberculous, chronic pyelitis or simple pyonephrosis? When the cystoscope showed a bloody urine spurting from one ureteral opening, was there tumor in that kidney or was the bleeding caused by a stone which did not show on the plain Xray plate? These are but a few of the many knotted questions arising from the mere fact that, with all of these various and valuable means of investigation, there still remained no way in which the actual structure of the suspected kidney might be visualized.

In answer to this perplexity, pyelography was soon introduced and rapidly developed until it now exists as a practically harmless, usually painless, and always extremely helpful aid in the diagnosis of any of the usual and unusual pathologies found in the kidney: all of this, however, provided it is done at the hands of one properly schooled in its execution and interpretation as well.

Pyelography is based upon several well tried and proven premises.

A. A sterile solution of thorium nitrate or sodium bromide when properly injected into the renal pelvis, in no way harms the patient.

B. After such an injection an Xray plate properly taken will show a clear cut shadow produced by the presence of this solution.

C. There are certain definite characteristics in a shadow so produced which are constantly uniform in all normal kidneys as well as in the same kidney at all times, provided it is normal.

D. With the exception of simple pyelitis and some cases of upper urinary lithiasis, all renal lesions present very striking changes in the shadow so produced. The nephritides, of course, are also excluded.

E. The changes in this shadow caused by any one type of renal pathology are sufficiently characteristic and different from the others that, disregarding all other findings, it is usually possible to make an accurate diagnosis of the condition present.

A normal pyelogram taken with the patient in the recumbent position usually shows the kidney pelvis to be on a level with the first lumbar vertebra even though a perfectly normal kidney is often found down one or two vertebrae in position. The pelvis has a usual capacity of about five c.c. It is of a definite funnel shape, gradually tapering downward and inward to the beginning of the ureter. There are usually three major calices branching outward into the renal cortex, though nothing pathological is suggested by the finding of two, four or five of these major calices. The distal extremity of each major calix broadens and then branches into several small finger-like shadows of the minor calices.



A

Figure "A" is a schematic sketch made to illustrate the characteristic features of a normal pyelogram. Note, first, the small size and funnel shape of the true pelvis which gradually tapers into the upper ureter; second, the shape and breadth of the (usually) three major calices; and third, the well defined finger-like projections representing the sulci at the sides of the renal papilli in the minor calices.

*Read before the Milwaukee Academy of Medicine Nov. 11, 1924.



PYELOGRAM 1

This is a pyelogram of a normal kidney. It is located at the level of the first lumbar vertebra. The true pelvis is small, funnel-shaped and tapers gradually into the upper ureter. The (two) major calices are of normal size and shape and each shows the numerous finger-like branchings within the minor calices. By careful inspection it will be noted that a little of the pyelographic solution can be seen running back down around the catheter. The normal ureter frequently appears slightly larger than the catheter in some parts but such bulgings, if normal, always gradually taper back to the catheter both above and below.

STRICTURE OF THE URETER

Until a few years ago, actual organic stricture of the ureter was considered to be a rarity and occurring then only as the result either of tuberculous ulceration or of trauma produced by stones. Following the rather recent pioneer work of Hunner, Urologists the country over are finding large numbers of cases of ureteral stricture. The pyelo-ureterogram gives evidence in this regard that would seem to be above dispute.

When actual obstruction develops at any point in the ureter, a dilatation of the rest of the ureter above the obstruction certainly follows. This dilatation is usually uneven and wave-like in character, but it is none the less definite. If the ureteral obstruction persists the next change noticeable in the pyelo-ureterogram is a definite blunting and gradual effacement of the fine finger-like

markings in the minor calices of the kidney. Following this a general enlargement of the entire renal pelvis occurs with the result that, by the time hydronephrosis is well developed, the pelvis is enormously enlarged and even the markings of the major calices are badly blunted or effaced.

HYDRONEPHROSIS

The pyelogram is indispensable in the diagnosis of hydronephrosis. Here also we find very characteristic changes which permit of accurate interpretation. It has been indicated that when long-standing back-pressure occurs in the kidney its cavity begins to balloon. This is first clearly noticeable by a blunting and gradual obliteration of the finger-like projections in the pyelogram which represent the sulci at the sides of the papillæ in the minor calices.

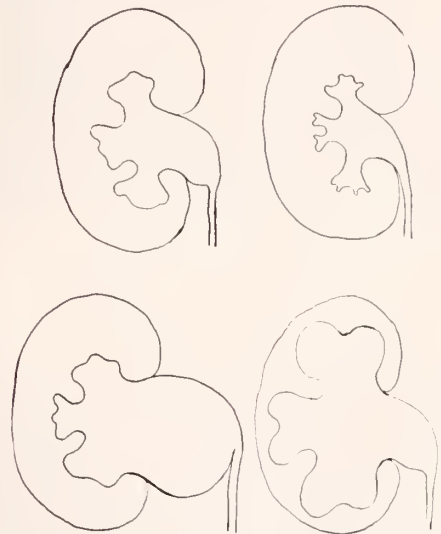


Fig. B

Fig. "B" is a schematic series of drawings made to show the changes in the pyelographic shadow at different stages in the development of a hydronephrosis. On the upper right is a normal pyelogram. On the upper left is a beginning hydronephrosis, evidenced by (a) increased capacity, (b) clubbing of the major calices and (c) obliteration of the minor calices. The two lower sketches are of advanced hydronephrosis. The lower left is one of the extra-renal type in which a fair amount of renal tissue remains in spite of an enormous increase in the renal pelvis. This type of kidney may be spared. The lower right is of the usual intra-renal type with complete destruction of the function of the kidney.



PYELOGRAM 2



PYELOGRAM 4



PYELOGRAM 3



PYELOGRAM 5

PYELOGRAM 2

This is the pyelogram in a case of ureteral stricture. The entire ureter is seen dilated. This is especially marked in the region of the upper sacrum where it is seen to be the size of the small finger in caliber. At the arrow which has been marked on the picture, the dilatation can be seen abruptly contracting to nothing more than the shadow of the ureteral catheter itself. In the upper part of the ureter there is a definite double kink which is purely secondary to the dilatation of the ureter. A dilated ureter is frequently kinked. The renal pelvis shows a slight general increase in capacity though no changes in the markings have yet occurred.

PYELOGRAM 3

This is a very excellent demonstration of the pyelographic changes in stricture of the ureter. This is a case of the duplication of the entire right upper urinary tract, there being two separate ureters leading from separate openings in the bladder up to separate pelvic cavities in the one kidney. The lower pelvis and its ureter are beautifully normal. In contradistinction to this normal lower pelvis, note that the ureter leading to the upper pelvis shows an area of definite dilatation beginning just above the tip of the catheter and continuing up to the pelvis except for a second constriction about an inch below the uretero-pelvic junction. This finding strongly suggests ureteral stricture, but of even more importance, it is very evident that a definite chronic backpressure exists within that pelvic cavity. That is evident by its moderately increased size, but more especially by the fact that the fine finger-like markings of the minor calices (so clearly apparent in the lower pelvis) have almost completely disappeared. Even the major calices are ballooned beyond clear recognition.

PYELOGRAM 4

This ureterogram visualizes in a very clear way the far-reaching effects of a long standing ureteral obstruction from stricture. The catheter could be advanced upward only to the point of the upper arrow and even then there was much difficulty in passing a definite obstruction at the point of the lower arrow. The plain X-ray plate taken before the catheters were introduced had shown a definite shadow considered to be a large ureteral stone. This shadow was of the identical shape and location as that part of the shadow in this picture above the upper arrow. After the pyelographic solution was injected through the ureter catheter, this picture was taken. It shows a definite stricture at the point of the lower arrow, a fact absolutely proven by the enormous dilatation of the ureter between the two arrows. That there was a complete obstruction at the region of the upper arrow is apparent from the fact that the catheter would go no farther, but more important still, that none of the pyelographic solution would run above this point. This case was proven at operation to be one of advanced pyonephrosis with a dead kidney, together with an ureter enormously dilated and containing a tightly impacted stone of the size and shape indicated by that part of the shadow above the upper arrow.

In reasoning this case backward from the pyelogram, it would seem that the primary pathology was that of a stricture at the site of the lower arrow. Then followed

the dilatation of the ureter and kidney pelvis. The hydronephrosis became a pyonephrosis. A stone formed and traveled until it was blocked by an impassable narrowing of the (dilatated) ureter where it became impacted and finished the job by completely sealing the kidney.

PYELOGRAM 5

This pyelogram demonstrates a very poor practise and that is doing a pyelogram on both kidneys at the same time. Aside from that it shows by comparison the changes which take place in the cavity of a kidney when there is a beginning hydronephrosis from urinary backpressure. The left kidney is beautifully normal, showing all of the typical characteristics of the contour of a normal kidney cavity. In contrast to this, a casual glance immediately notes a difference on the right. Though the upper major calix on the right may be considered normal, there is a definite clubbing of the other two major calices with just as definite blunting of the minor calices. This is especially apparent in the lower calix. A glance at the whole immediately detects a certain enlargement of the kidney itself as well as of its total cavity.

RENAL TUBERCULOSIS

Tuberculosis of the kidney is a disease which is usually recognizable with absolute certainty by the various other less radical means of urological investigation. Instances do occur, however, in which doubt remains after all of these common methods of investigation have been employed. Pyelography in renal tuberculosis, when properly done is a perfectly safe procedure, certain alarmists to the contrary notwithstanding. Further than that, the pyelogram found in cases of renal tuberculosis of the common cavernous type is more characteristic and unmistakable than that of any other type of renal pathology.

In renal tuberculosis, though there may be and usually is an increase in the total cavity of the kidney, this increase occurs in an entirely different manner than in hydronephrosis. As a matter of fact the true pelvis of a tuberculous kidney, like the ureter leading from it, is usually lessened in caliber by cicatricial contraction of the products of



long standing inflammation in its submucous wall. The increased cavity which does occur in the kidney is the result of the formation of the characteristic large cavernous tuberculous abscesses in the kidney parenchyma. These rupture and drain leaving a permanent fistulous connection with the cramped and distorted



PYELOGRAM 6



KIDNEY OF PYELOGRAM 7



PYELOGRAM 7

PYELOGRAM 6

This is a pyelogram of a moderate hydronephrosis. Further than that, the fact that at least the upper part of the ureter is dilated definitely indicates that the ob-



PYELOGRAM 8

struction is somewhere in the lower ureter, probably an ureteral stricture. The shadow of the renal pelvis shows a definite increase in capacity, (compare it with the size of the vertebral bodies) a distinct clubbing of the major calices and considerable effacement of the minor calices.

PYELOGRAM 7

Here we have a pyelogram of a very advanced stage of hydronephrosis. The penned outline is exactly as it appears on the pyelographic film. The enormous increase in pelvic capacity together with the complete effacement of all minor calices and the nearly total effacement of the major calices, shows the kidney to be little more than a shell of thinned out and functionless renal tissue. It is interesting to note the fine trickle of pyelographic solution seen connecting the catheter tip and the renal pelvis. This strongly suggests a tight stricture of the ureter in this part. The fact that the ureter is distinctly dilated beginning about a half inch below the catheter tip is undeniable evidence of another obstruction farther down, again probably an ureteral stricture. That the truth is always told by a pyelogram is clearly evident when this is compared with the photograph of the kidney after it was removed.

KIDNEY OF PYELOGRAM 7

This kidney has been split from pole to pole and laid completely open. The enormous increase in the pelvic cavity can be seen very plainly. The dilated lower major calix that was seen in the pyelogram has been bisected and can be noted in the lower pole of the cut

renal pelvis. This is all clearly exemplified in sketch "C".

Contrary to this description, there are occasional cases of renal tuberculosis where the ureter and true kidney pelvis are distinctly dilated. This is the secondary result of contraction of a tuberculous stricture lower down in the ureter with a damming back of urine into the upper ureter and true kidney pelvis. This is in fact a pyonephrosis. In such a case, of course, the pyelogram typical for renal tuberculosis will not be found, but more likely, it will simulate that of pyonephrosis or hydronephrosis, both of which, so far as the pyelogram is concerned, are identical.

RENAL TUMOR

Pyelography is a very necessary means of examination in the diagnosis of tumors of the kidney. If the usual three cardinal symptoms of kidney tumor (pain, hematuria and tumor) are allowed to develop before the condition is recognized the diagnosis accomplishes nothing more than to satisfy the patient's curiosity. For the diagnosis to be of any practical value it must be made before the tumor has advanced to that degree. Diagnosis of renal tumor, to be sufficiently early to give the patient some chance of operative cure, must necessarily depend upon the pyelogram in most instances.

The pyelogram in renal tumor might be said

kidney. The thin shell of kidney parenchyma that remains indicates the nearly complete destruction of function in that kidney.

PYELOGRAM 8

In pyelogram No. 8 we see all of the characteristics of a pyelogram in a case of renal tuberculosis. The one exception is that the ureter is dilated, tapering from the region of the kidney pelvis downward and gradually enlarging until at the level of the iliac crest it is the width of the thumb. This dilatation is undoubtedly due to a tuberculous stricture of the lower ureter; a situation which prevented passing the ureteral catheter more than two inches up that ureter (hence it cannot be seen in the picture).

So far as the renal pelvis is concerned, there is none, or rather it remains only as a fistulous tract connecting the numerous rounded cavernous abscesses in the renal cortex with the upper ureter. This picture of numerous rounded cavernous cavities varying in size and always occurring in the renal cortex and seen in a kidney showing a very cramped true renal pelvis is pathognomonic for cavernous renal tuberculosis. Nothing else could mimic it.

to be typically atypical. That is to say, its characteristic feature is a bizarre and never-the-same distortion of the renal pelvis. This is the result of the pulling, pushing and stretching of the kidney cavity by the growing irregular masses of tumor tissue. Though no two pyelograms of kidney tumor are at all alike, there is a tendency for them all to assume a so-called "spider" type of deformity which is due to the thinning out and elongation of the several major calices by compression between growing masses of tumor tissue. A Chinese proverb is to the effect that "a picture is worth a thousand words" and a clearer idea of the type and development of the pyelogram characteristic for kidney tumor is left to be gotten from the accompanying sketch.

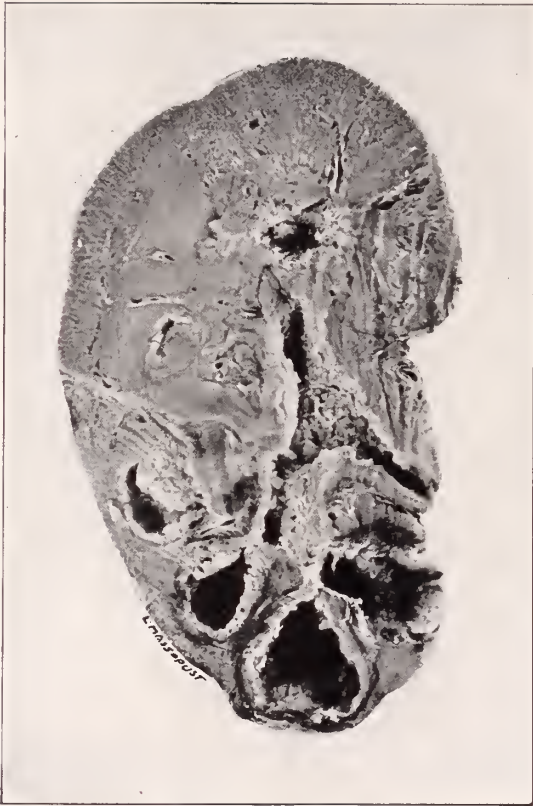


Fig. D

CALCULUS DISEASE

Though the profession has been very slow to recognize it, pyelography is a very necessary step in the investigation of all cases of upper urinary stone. By it, and by it only, is one able to know in advance of operation, any or all of three im-

(Continued on page 83)



A TUBERCULOUS KIDNEY



PYELOGRAM 10



PYELOGRAM 9



PYELOGRAM 11

A TUBERCULOUS KIDNEY

This kidney is not the one in the case of the preceding pyelogram. It looks exactly as that kidney did when removed, however, except in the case of the pyelogram the abscess formation (as can be clearly seen in the pyelogram) was confined to the middle and upper pole of the kidney, whereas in this specimen, it appears in the lower pole of the kidney. Of particular interest in this specimen is the true renal pelvis. It will be noted as little more than a "Y" shaped fistulous tract connecting the ureter to the tuberculous abscess in the upper and lower kidney poles.

PYELOGRAM 9

This is another pyelogram in a case of cavernous renal tuberculosis and is wonderfully typical in every respect. In the renal shadow, nothing can be made out that might even be suspected to be the true renal pelvis. The cavity of the kidney appears as nothing more than a number of rounded shadows of varying size, each representing the shadow made by a cavernous abscess which has been successfully filled with the pyelographic solution. If this renal picture left any doubt as to the condition, the shadow of the ureter would cinch the diagnosis. Note the "motheaten" appearance caused by the irregular surface of its interior made by the profusion of granulation tissue completely lining the tube. This is the picture of the so-called "pipe-stem" ureter so characteristic in renal tuberculosis. It is interesting to note the two nut-sized dilatations one above the other and both seen through the shadow of the sacro-illiac joint. This is but one more of the innumerable instances proving the physiological fact that dilatation must develop above obstruction,—in this case evidently an unusually tight constriction of the ureteral lumen just as it falls over the pelvic brim.

PYELOGRAM 10

This pyelogram is also one taken in a case of renal tuberculosis. It is not as typical as either of the two preceding ones and might cause some confusion in interpretation. The confusion arises over the fact that a very definite pelvic cavity is seen. This argues strongly against the diagnosis of renal tuberculosis. A plain plate, however, shows the presence of a calculus the size, shape and location of what in the pyelogram, appears to be the renal pelvis. That finding, together with the rather typical multiple rounded cavities some of which at least seem certainly to be in the renal parenchyma, makes the diagnosis of tuberculosis certain. This picture could only be confused with one of hydro- or pyonephrosis. That these rounded parenchymal shadows are not dilated calices (hydronephrosis or pyonephrosis) is apparent from the fact that they are not joined to the renal pelvis by the usual dilated calical neck. In fact the cavity in the upper pole can be seen to be connected with the renal pelvis by nothing more than a thread-like fistulous tract. In the mechanism of dilatation of the renal pelvis from back-pressure retention, the neck of the calix must be dilated just the same as the tip of the calix.



KIDNEY OF PYELOGRAM 11

By comparing this kidney with its pyelogram one is again struck with the uncanny accuracy with which a pyelogram tells its story. Though this pyelogram is not of the usual "spider" type of deformity, it is none the less definite in demonstrating that a tumor of the kidney exists. It will be noted that all of the kidney cavity has been crowded down to the lower part of a very large kidney mass. Nothing could do this but a tumor of the kidney. By comparing the pyelogram with the bisected kidney it is interesting to note that the necropsy verified the diagnostic assumption that this tumor mass had crowded and flattened the three major calices against the lower outer kidney wall. Though no such interpretation was made before operation, one wonders why the diagnostician did not also foretell that the kidney pelvis was filled with a large intra-pelvic protrusion of tumor tissue. The pyelogram certainly shows it, and there it is in the cut specimen!

In passing it will be noticed that a "kink" in the ureter is plainly apparent in the pyelogram. Such "kinks" are frequently encountered in pyelography and are usually not actual kinks but simply loose and unobstructing angulations due either to misplacement by the stiff catheter or to the natural torsion of an elongated ureter or to both, as is the case here. In this case the extreme upper end of the ureter has been carried down some two inches by the kidney tumor. The ureter will not telescope; it merely buckles and bends. Kinking of the ureter is of no consequence unless it causes obstruction. If there is obstruction, there must be dilatation above it. Hence, dilatation above an apparent kink is the only true grounds for diagnosis of a kink. Dilatation above it and not below it!

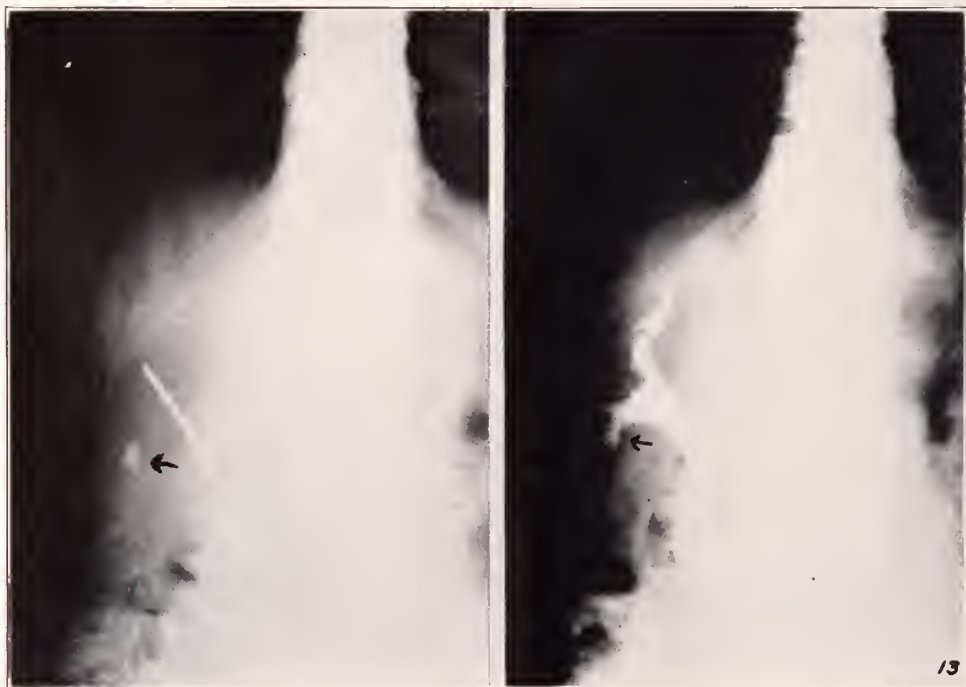


PYELOGRAM 12

Though this was not an excellent pyelogram and has had to be retouched to appear clear in print, it does show the typical "spider" deformity of the renal pelvis so characteristic of renal tumor. It was taken the day after a barium meal and considerable of the barium is seen still present in the lower bowel.



PYELOGRAM 18



PYELOGRAM 13

This picture gives considerable useful information. It shows the stone to be in the extreme lower calix and probably more accessible by nephrotomy than by the more popular pyelotomy. It also shows what is very apparently an otherwise normal kidney.



PYELOGRAM 14

The plain picture in this case showed a single stone apparently in the lower pole of the kidney. The pyelogram shows something else. By comparative location it is evident that the stone lies at the uretero-pelvic junction. The renal pelvis is enormously enlarged and there is marked blunting of the renal calices evidencing a moderately advanced hydronephrosis. This immediately raises the question as to whether the kidney is worth saving. In this case, the facts that the hydronephrosis was very evidently due to obstruction from the stone; that the urine showed no pus or bacteria; and that the function of the kidney by phthalein was at least one-third of normal, all indicated that there was a worth-while function still left in that kidney and that removal of the stone through a pyelotomy would probably spare what kidney was not already destroyed.

PYELOGRAM 18

This odd double pyelogram was taken ten days after a young man had been opened over a rather movable tumor the size of an orange centered at the right of the umbilicus. The surgeon at once recognized the mass as kidney tissue in spite of its unusual size and shape and of a definite congenital lobulation of its surface. This particular surgeon was clever enough to explore and find that there was no kidney where one should be on the other side. The abdomen was of course closed and nothing done. One shudders to think what might have happened to the young man.

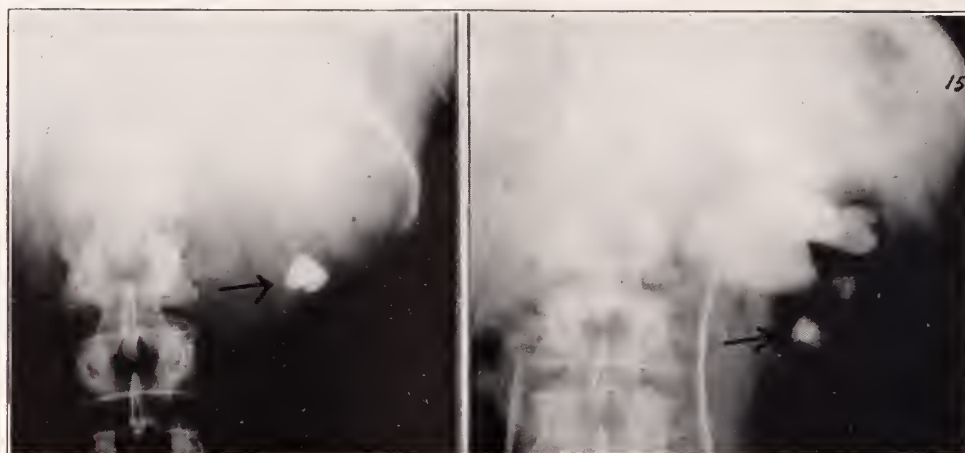
The entire situation is made entirely clear by this double pyelogram. Both ureteral catheters are seen to leave the bladder and course up the bony pelvis to its brim in the usual location. Above this point they both swerve sharply to the right and both enter separate renal pelves in a fused kidney at the right of the spine. There is nothing suggestive of pathology in the shadow of either pelvis.

(Continued from page 79)

portant things. It is important to know at least in a general way, in what part of a kidney the stone lies. Of greater import is the question of how much damage has already been done to the kidney by the stone. Most important of all, might not the stone simply be an incidental item in some other kidney pathology?

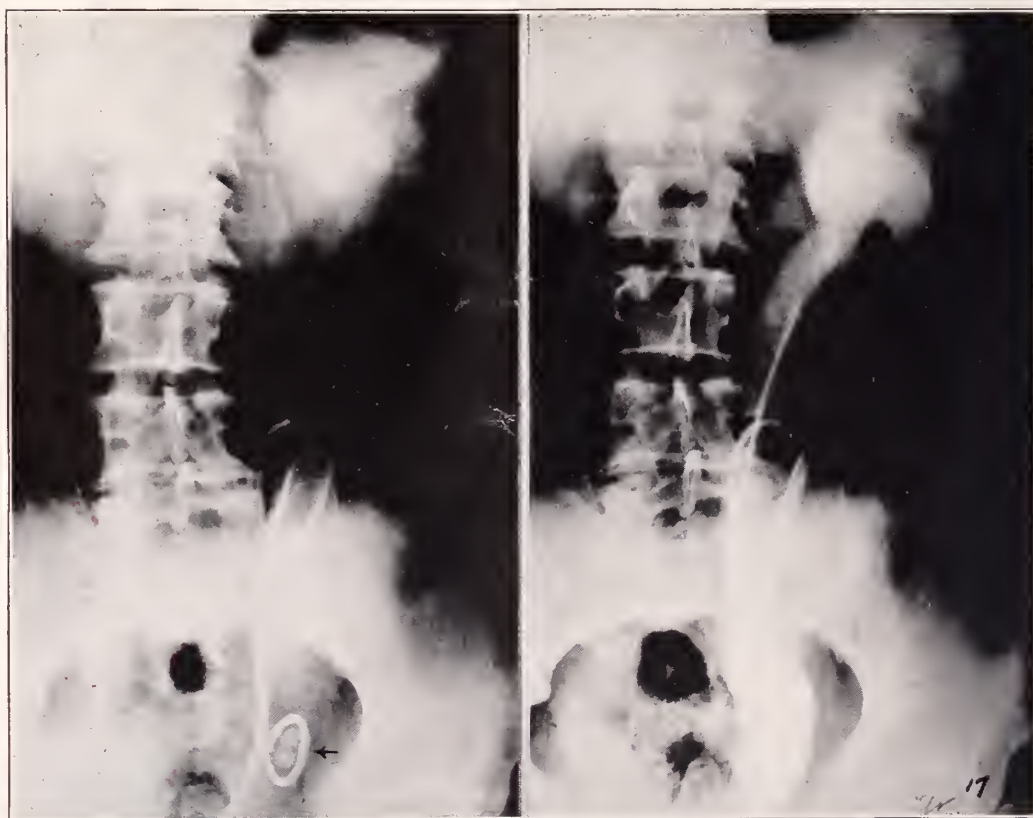
ANATOMICAL ANOMALIES

Anomalies of the upper urinary tract are met with sufficient frequency to warrant some consideration. Imperfectly formed kidneys seem somewhat prone to pathological developments. The lack of preoperative knowledge of the exact type of deformity usually renders the operation useless and sometimes is the background for a disastrous procedure.



PYELOGRAM 15

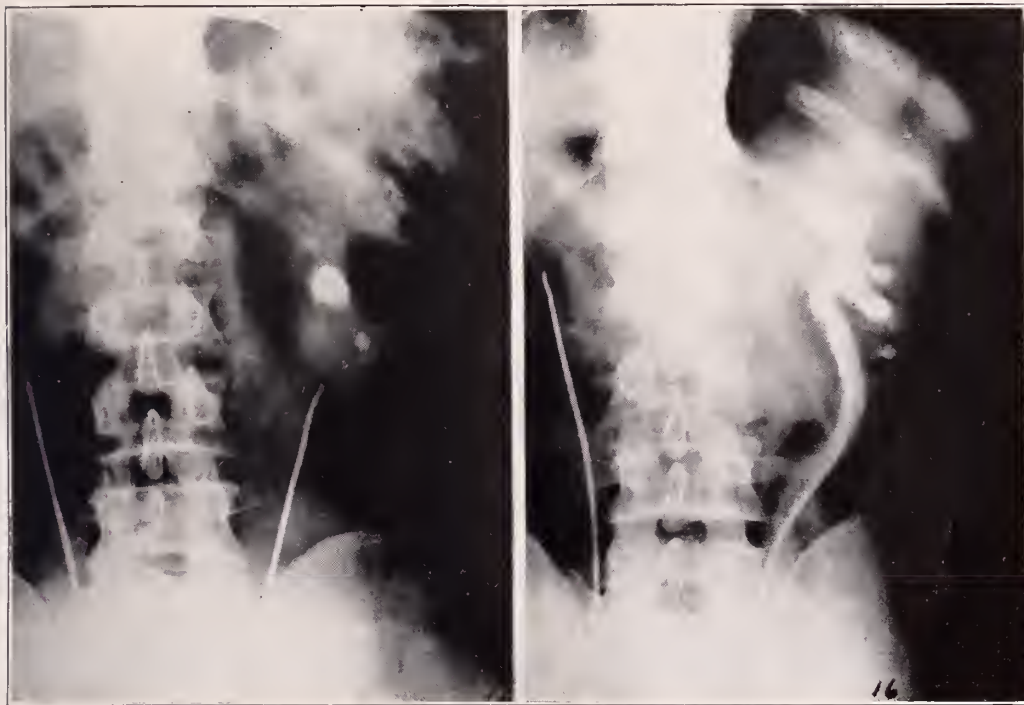
The plain picture in this case shows a stone apparently in the lower pole of the kidney. The pyelogram should be a considerable surprise to the surgeon whose plan would be to remove the stone. In the first place there is an advanced hydronephrosis which has rendered the kidney perfectly worthless with or without the stone. In the second place, the stone is secondary, not primary, to the hydronephrosis (it was actually a pyenephrosis). With these facts in mind, removal of the stone would have been a useless procedure.



PYELOGRAM 17

In this case a plain X-ray was taken and two suspected stone shadows were found in the anatomical pelvis. A lead catheter was passed up the left ureter so that its shadow, lying at the side of or away from the stones, would indicate whether these actually were stones within the ureter. Curiously enough the picture taken with the catheter passed, certainly showed the stones were in the ureter because it actually looped around them! The pyelo-ureterogram cleared things up beautifully by showing an enormous hydro-ureteronephrosis with the ureter dilated to the size

of a large thumb. Of course these stones are merely incidents of little or no importance in the presence of a totally useless upper left urinary tract. An operation simply to remove the two stones would be at least unwise.



PYELOGRAM 16

This is a pyelogram of a kidney which had been operated upon for removal of stones seven years before by a surgeon in Italy. We have no way of knowing whether the surgeon removed all stones at that time and these are reformations or whether these were simply overlooked at the time. The condition of the next to the last rib might indicate that he was in trouble at the time. Nevertheless, whether he was able to remove all or whether some remained after that operation makes no difference because his operation must have been fruitless in the light of this pyeloureterogram. The dilatation of the ureter speaks in unmistakable terms the presence of a stricture low down in the ureter. Residual urine back of an obstruction is very likely to be infected. Retained urine that has become pusy is very liable to result in stone formation. This patient has residual urine retained back of his ureteral stricture and it is quite pusy. Removal of these stones would certainly not improve his symptoms (pain in the back and cystitis) and probably his stones would reform. On the contrary, dilatation of his strictured ureter would undoubtedly improve both of his symptoms and possibly give him complete and permanent relief. At least it would make way for a successful nephrolithotomy at a later date.

Dr. Warfield Visits Medical Clinics at Würzburg, Munich and Heidelberg; Tells of Unusual Heart Case

Vienna, May 31, 1925.

My dear Mr. Crownhart:

A bit of news which may possibly be of interest to my readers is that Prof. Hans Eppinger of the First Medical Clinic here has been called to the chair of Internal Medicine at the University of Prague. Those who are in a position to know tell me that he has accepted. He leaves some time late in the summer. It seems that the Czechoslovakian government has to pass on the appoint-

ment, but no one here doubts the favorable action. Prof. Eppinger lacks the genial qualities which are in the make-up of all great men. Perhaps, when he is placed in a position as head of a great department he will come out of his shell and be more like other men.

General conditions in Vienna are not good. Business is at a standstill and unemployment is constantly increasing. The pessimism in the business world is reflected to some extent in medi-

cal matters. One is told that when the present men here pass on there are no men to take their places and carry the torch onward. However, in our life time there will hardly be any deterioration in this faculty. There are some great men here, some, not all. I am inclined to believe that the impression of world superiority is due, in part, to organization and concentration of work here. The American doctor finds he can get practically everything he wants in post-graduate work, provided he does two things: (1) he pays for it; (2) he remains long enough here.

Just at present there appear to be fewer Americans registered at the A. M. A. rooms than usual. In fact, the first time in three years the popular course in gross pathology given by Prof. Erdheim is interrupted owing to the fact that only four men signed for it. Usually there are at least twenty who sit around one of the marble autopsy tables in the large, well-lighted autopsy room and see, in one afternoon, the organs from ten to fifteen bodies. Whole vertebral columns are sawed in half from cervical vertebrae to sacrum. Femurs, tibias, humeruses are sawed longitudinally. Several times I have seen small cancer metastasis hardly more than one cm. in diameter in the medulla of the femur or tibia. Prof. Erdheim evidently likes to teach: he seems to get a lot of real enjoyment in tracing out sources of infection and the seats of primary tumors.

Vienna seems now to have more large hospitals than she needs. Formerly there were many patients from the Empire with its 55 million inhabitants. Now Austria has 7 million. Very few patients from Hungary or from the Balkan States come here now. However, these large hospitals are by no means empty, and often they provide better facilities for one who wishes to study internal medicine than the large university clinics. There is always a first-class man, a professor in the faculty, in charge. The assistants are fewer and more opportunity is offered to the American doctor to handle patients. I have visited several of these hospitals situated far from the center of the city and have seen what profitable work some of the Americans have found. Of course, one must pay for the privilege of working in the wards. Then if special instruction is wanted the professor himself or one of his assistants is usually glad to devote an hour or two a week for a con-

sideration. This is perfectly fair and satisfactory to both parties concerned.

I have recently visited the medical clinics at Würzburg, Heidelberg and Munich. (En passant, the beer is delicious.)

Prof. P. Morawitz, formerly an assistant of Prof. Krehl, is at Würzburg. The hospital of the university consists of a large group of three and four-story buildings on the edge of the town, accessible only on foot or by private conveyance. The situation seemed rather inconvenient. The city has about 100,000 inhabitants. The hospital seems too large for the city, but as we went through the wards we noticed no empty beds. The proportion of male to female patients was about the same. We saw a number of women who were said to have pyelitis, not during or after pregnancy. We were told that they were for the most part *B. coli* infectious, although occasionally anaerobic organisms seemed to be the cause. No wonder women have bacillus coli infections in this part of the world. The state looks upon bathing in bathtubs as a luxury and therefore taxes baths heavily. No baths, much dirt. Much dirt much infection, especially from anus to bladder in women.

The buildings were comparatively new and the equipment was fair. I was not much impressed with the work being done in the clinic.

At Heidelberg it was quite different. The town itself is fascinating, the situation among the hills is beautiful. No wonder so much has been said and sung of Heidelberg. All know that Prof. L. Krehl is the head of the medical clinic. The new buildings were completed only recently, in 1922. There is nothing elaborate about the large building which is in the form of the letter "H." In fact, with its plain lines, unadorned and painted a dull yellow color, it is not prepossessing in appearance from the exterior. There is nothing fancy about the inside. No money was spent on expensive materials. It is simple and well built. One can see that the hospital was built primarily for the care of patients, but at the same time huge space was built for the housing of all kinds of modern equipment used in the study of patients. Except for anatomy and pathology the clinic is a medical school in itself. I have not seen such splendid equipment in any medical clinic I have thus far visited. Clinical investigation, as well as experimental investiga-

tion, is evidently being intensively carried on in the clinic. In this, as in other medical clinics, there are rooms for a library where current journals, many bound files together with textbooks and reference books are available for members of the staff. There was also, as in all clinics, a large amphitheatre for teaching, equipped with all modern improvements. I wished that I were a quarter of a century younger and were just beginning a year's stay with the clinic.

In Munich I visited the two medical clinics presided over by Professors F. Mueller and Romberg, the latter a nephew of the Romberg sign discoverer. The former showed us (a doctor friend and I) his general methods of teaching students by means of his numerous original charts and diagrams. He has interested himself for some years in the preparation of charts, illustrating the fundamental anatomical and pathological facts and principles upon which diagnosis is largely built. Unfortunately we did not hear him give a lecture but we did see him conduct a class in percussion in one of the wards.

We asked him about goiter. He confessed that he was somewhat bewildered and did not really have any positive views. Since he had looked over some sections from Vienna cases and had seen how they differed from his cases with apparently the same group of symptoms, he had made up his mind to attack the problems anew from every angle. He was now studying intensively a few cases and hoped to bring some order out of the chaos. He did feel sure that iodine, even in small doses given to people over 25 to 30 years of age, was dangerous. He was certain he had seen many cases of so-called "Jod-Basedowshe Krankheit." He admitted, however, that what seemed to be true of goiter in Munich did not necessarily seem to be true in Vienna, Hamburg, Zurich or Bern. We wished we could have remained a while in his clinic. Prof. Romberg had to leave so we only met him and heard him give a student clinic on a case of pernicious anemia.

I have recently seen a rather unusual heart case in Prof. Winterberg's wards in Vienna. A man 35 years old who had never been ill in his life, an athlete and football player, suddenly collapsed while playing in a football match one afternoon three months ago. He was not at the time struggling for the ball. There was no history of sudden muscular strain. He was carried from

the field and since then has been unable to take the slightest exercise. He noticed also that at night when he lay down he heard a noise in his chest synchronous with his heart beat.

The man is healthy looking, well muscled and, except for his heart, shows no abnormalities upon examination. There is normal temperature, normal action of bowels and kidneys. The heart is enlarged downwards and to the left, typical of the enlargement of aortic regurgitation. The apex beat is forcible. Over the body of the heart a most intense diastolic thrill is felt. On auscultation there are the usual signs of aortic regurgitation, but the diastolic murmur has a high pitched, intensely loud, musical quality, heard even with the ear close to, but not against, the front of the chest. The Wassermann reaction is negative. What happened? None of those who have seen him believe that his aorta and valves were normal before the accident. Most of us think there was a rupture of the aorta near the ring which tore a valve and left the sclerosed tag projecting in the blood stream. The aorta is not specially widened. He may later develop a dissecting aneurism. The most probable etiological factor in laying the ground for the rupture is syphilitic mesaortitis in spite of the negative W. R.

I leave Vienna June first. I hope to visit several clinics in Austria and Switzerland. My next and last letter will probably be from London as I am sailing July 17th.

Cordially yours,

Louis M. Warfield.

DR. STEVENS APPOINTED

Dr. Edith Haigh Stevens, Madison, was appointed to the State Board of Medical Examiners by Gov. John J. Blaine on June 24th. Dr. Stevens fills the homeopathic vacancy for the unexpired term of Dr. G. H. Ripley, Kenosha, deceased.

WISCONSIN MEN A. M. P. O. OFFICERS

At the recent national meeting of the Alpha Mu Pi Omega Medical Fraternity at Atlantic City, Dr. J. Gurney Taylor of Milwaukee was elected grand president for the coming year. Dr. Wm. Thorndike, Milwaukee, was elected grand secretary and Dr. Geo. A. Harlow, Milwaukee, was elected grand treasurer of the fraternity.

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SERVICE AVAILABLE

There is listed the following definite services that are available to our readers—the members of the State Medical Society of Wisconsin. If you have a need not covered here address the Secretary, Mr. J. G. Crownhart, 558 Jefferson Street, Milwaukee. "Let George do it."

FOR THE MEMBER

1. *Package Libraries* are now available on Cancer, Schick Test, Vaccination, Periodical, Physical Examinations, Insulin, Fractures of Long Bone, Protein Treatment, Control of Communicable Diseases, Goiter, Digitalis, Pneumonia, Diseases of the Knee, Encephalitis, Asthma, Epilepsy, Meningitis and Scarlet Fever. Address Package Library Department, Extension Division, University of Wisconsin, Madison. Material on other subjects compiled upon request.

2. *Medical Books* will be loaned by the Medical Library, University of Wisconsin, Madison, Mr. Walter Smith, Librarian. Order through local library where possible.

3. *Physicians' Exchange Column* is open to all members without charge.

4. *New Scientific Publications* listed in the Book Review columns of this Journal are available for inspection by the members. They are in the Medical Library, University of Wisconsin, Madison. Place your order through your local library where possible or address Mr. Walter Smith, Librarian.

5. *State Laws* and departmental rulings can be secured through the Secretary's office.

6. *Legal Advice* upon questions pertaining to the practice of medicine will be given in so far as is possible. A complete statement of the question or facts must be forwarded.

7. *Inquiries.* Any inquiry with reference to pharmaceuticals, surgical instruments or any other manufactured product which you may need in home, office, sanitarium or hospital, will be promptly answered. Address all inquiries to Wisconsin Medical Journal, or write direct to Cooperative Medical Advertising Bureau, 535 North Dearborn Street, Chicago, Illinois. The Bureau is equipped with catalogues and price lists and can supply information by return mail.

FOR THE COUNTY SOCIETY

1. *Program Material.* Pursuant to authorization by the 1924 House of Delegates the Secretary is arranging to make program material available without cost. The following can now be secured:

A. Departmental Officers of the State Board of Health. Address Dr. C. A. Harper, State Health Officer, State Capitol, Madison, Wis.

B. Clinicians of the Wisconsin Anti-Tuberculosis Association when in vicinity. Address Clinic Dept., W. A. T. A., 558 Jefferson Street, Milwaukee.

C. Councilors and Officers of the State Society. Address the individual.

2. *Annual Statements.* Uniform annual statements can be had without cost. Address the Secretary, advising number desired.

EDITORIALS

NOT "CURE-ALLS" BUT AIDS

SINCE physiotherapy has come into general use as a therapeutic measure, there is danger that it will be overworked by those insufficiently trained in its indications and use, and thereby fall into undeserved disrepute.

In a large number of conditions, notably those following injuries to bones and joints and contiguous soft parts, mechanical treatment is necessary and beneficial and the period of disability can be considerably shortened. The refinements of this form of treatment have been worked out into a system which has become a specialty.

Under the head of physiotherapy is included baths, massage, and electricity in its various forms of which diathermy and heliotherapy are just now the most popular. Of all these, massage probably has the greatest general value and all others are an aid to it. Properly applied it is real work and requires a good physique and training on the part of the operator. It is least potential for harm. The quartz lamp and the so-called electric modalities are dangerous in the hands of the un-informed, and should only be used by those familiar with their effects, and always under the direction of a physician.

Physiotherapy as is now being so generally practiced will go the way of all other systems which have come and gone. The reason is that they have not been rationally applied and have been used in so many conditions, in ill selected cases and by incompetent hands.

When it is no longer used as a cure all and is applied to properly selected cases and administered by competent, properly instructed and trained technicians, it will become a therapeutic aid of the highest value.

This method of treatment has great possibilities and the medical profession must not let it get into the discard.—J. M. D.

WISCONSIN PHYSICIANS HONORED

THE honorary degree of doctor of science was conferred upon Dr. John M. Dodd, Ashland, and upon Dr. John M. Dodson, Chicago, during Wisconsin commencement exercises in June. Doctor Dodd was awarded the honorary degree at the fourteenth annual commencement of North-

land College. Doctor Dodson, long a resident of Wisconsin and now editor of *Hygeia*, was awarded the honorary degree at the commencement exercises of the University of Wisconsin.

This Journal, representing the physicians of the state, offers sincere congratulations to the recipients of this honor. Both have given of their time and service in the advancement of the profession. Through years of service both have made contributions to society that will stand as an inspiration to others.

EVALUATION OF THERAPEUTIC APPLIANCES

AT the Atlantic City meeting of the American Medical Association held in May of this year a resolution was unanimously passed by the House of Delegates requesting the Board of Trustees of the Association to appoint a "Council on Non-Medicinal Therapeutic Agents" similar to the "Council on Pharmacy and Chemistry" which has, during recent years, done most valuable work in the investigation of the nature and therapeutic action of drugs offered for sale to the profession. The resolution provides that the trustees shall appoint a council or commission of physicists, clinicians and pathologists who shall investigate non-medicinal therapeutic appliances offered for sale to the profession and shall report the results of their investigations in the *Journal of the American Medical Association*. The average medical man has neither the time, technical skill nor laboratory facilities for correctly determining the value of the various kinds of lights, electrical appliances and mechanical contrivances which are from time to time offered for sale by salesmen who are in many instances none too honest in the claims made for their wares; consequently, the back rooms of doctors' offices or the attics of their barns are often found filled with discarded devices which were at one time or another much in vogue but have been discarded as worthless. To the physician this often means a considerable financial loss and to the patient, the waste of much valuable time because of the resort to some form of "treatment" before an accurate diagnosis has been made.

It is to be hoped that the trustees of the Ameri-

can Medical Association will wisely carry out the provisions of this resolution thereby affording the physicians the necessary knowledge as to the nature and action of these appliances which shall save them money invested in useless contrivances and their patients the expense of worthless and even harmful "treatment" as well as the loss of valuable time before the making of a correct working diagnosis.—J. F. S.

WOULD YOU LIKE THIS?

ONE of the most interesting, stimulating and suggestive of the publications that come to the desk of the writer is the monthly "Statistical Bulletin" of the Metropolitan Life Insurance Company. While it is concerned primarily with data on, and discussion of, the mortality and morbidity of the policy holders of that company, the number of these is so great that their experience forms a very fair cross section of the sickness and death experience of the country as a whole.

And, unlike the records of the United States Governmental bureaus, the statistics are made available while they still have a timely interest and practical value. As we have previously pointed out, here, publication of government statistics is delayed until they have, as a rule, only an historical or antiquarian interest.

It may seem a far cry to some for a private practitioner of medicine to concern himself with nationwide trends in death and sickness rates, or with reports of special outbreaks of contagious diseases in communities and districts remote from the home community. This should not be so, unless one considers provincialism to be something to boast about.

We have not been authorized to make this offer but feel quite certain, nevertheless, that we could induce the Metropolitan Life Insurance Company regularly to mail the bulletin to such Wisconsin physicians as would be interested to receive it. In any case, we shall be willing to try on receipt of a postcard sent to the office of this Journal.

—H. E. D.

WISCONSIN HOSPITALS APPROVED

Eighteen hospitals have been added to the list of those approved by the Council in Medical Education and Hospitals of the American Medical Association for the training of interns. These hospitals include the St. Elizabeth Hospital of Appleton and the Marquette University Hospital at Milwaukee.

THE JOURNAL CLINIC

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The University of Wisconsin

A CASE OF DOUBLE KIDNEY WITH CALCULI

BY C. E. SMITH, M.D., and H. E. KASTEN, M.D.,
Beloit

A white male 51 years of age came under observation complaining of chills, nausea, pain in the right side and back and an enlargement of the abdomen under the right rib margin.

The trouble began at the age of 12 with an attack of pain in the right side which lasted for three or four days and disappeared. Similar attacks came on every three or four months and were called exacerbations of chronic appendicitis. The last attack was more severe than any he had had and required an opiate. The pain was a dull ache over the crest of the right ileum and radiated down to the region of the bladder.

Examination revealed a large mass under the right costal margin. Urine was loaded with albumin and pus cells. White count 18,700, temperature 101.2 F., and a negative Wasserman. The X-ray plates showed two dense shadows, one elongated and round 12 cm. long, lying midway between the anterior iliac spine and the midline of the abdomen in the direction of the ureter and the other at the level of the first lumbar vertebrae.

Cystoscopic examination showed a marked cystitis. Two urethral openings were seen and easily catheterized. The urine from the left side was abundant, clear and the phthalein time $4\frac{1}{2}$ minutes. The urine from the right side came very slowly and contained pus and a few red cells. The phthalein time was 12 minutes with a very low total excretion of the dye. From the pyelogram it was concluded that we were dealing with a kidney with two separate pelves and two separate ureters. That the enlarged shadow in the kidney region was a pyonephrosis with a calculus in the kidney pelvis and another in the corresponding ureter.

Operation verified those conclusions, a large two lobed calculus being found in the lower pelvis of the kidney and a long one 12 cm. in length and weighing 12 ounces was taken out of the ureter.



Figure 1. Photograph of the kidney showing the doublepelves and marked destruction of the kidney tissue and dilatation of the calices.

In view of the low function and destruction of tissue the kidney was removed.

Cross section of the kidney disclosed two distinct pelves with complete destruction of the parenchyma of the lower pelvis. The upper pelvis was fairly normal showing some evidence of the existence of pyelitis.

years in charge of a section of that city with a population of 70,000, for which section I was responsible directly to the Commissioner of Health. This experience gave me an understanding of the valuable service which a health officer renders the community, which I had not before, except in a more or less vague way, appreciated.

PREVENTIVE MEDICINE

Edited by

W. D. STOVALL, Chairman

Section on Preventive Medicine, State Medical Society of Wisconsin

This Section is open to all members of the State Medical Society and others who wish to discuss subjects pertaining to Public Health. Original articles, and criticisms of statements appearing in this section are earnestly solicited. Questions concerning public health procedure will be answered. Address communications to Dr. W. D. Stovall, State Laboratory of Hygiene, Madison, Wis.

I found upon close and careful study of the subject assigned me, "The Value of Public Health Nursing to a Community," that it was more difficult to discuss than I had thought. I found that it might resolve itself into a recital of accomplishments, which after all it is not possible to do, because of the interdependence of our work upon your work and upon the work of other agencies in the community with whom we are so closely associated.

VALUE OF PUBLIC HEALTH NURSING AND THE FACTORS THAT DETERMINE ITS VALUE*

BY CECILIA A. EVANS, R. N.,

Acting Director, Bureau of Public Health Nursing,
Wisconsin State Board of Health.

It is a pleasure to meet you, the Health Officers of the state, for you are our allies as we are yours in the promotion of health and the prevention and cure of disease. It was my privilege to work with a city health department for six

We like to think that public health nurses have made a contribution to the increased interest in health, to the lowering of the death rates, and to the gradually increasing span of life, but it is not easy to say just what it is. We know that what part we have had has been dependent to a large degree upon the advances in medical and sanitary science and in the ever increasing interest of communities in their own well-being. On the other hand, we know that such facilities as expert medical advice, clean milk, etc., are of little avail without the nurse to follow the cases into the homes, demonstrating, explaining and interpreting the

*Read before Wisconsin Conference of Health Officers, Madison, Sept. 25, 1924.

doctor's advice. So far as credit goes, I believe we have progressed past the point of caring who gets it. If we have the right spirit toward the work, we must realize that results come from the combined efforts of all, and it is the composite whole we are interested in, not in what "we" did.

Because, therefore, of the foregoing, I have modified the subject to read, "Determining Factors in the Value of Public Health Nursing to the Community."

There are to my mind four determining factors in the value of public health nursing to a community:

1. The nurse herself—her character, her preparation and her experience.
2. The appreciation of the community of its own needs and of the work which the nurse can accomplish.
3. The kind and scope of the program which is initiated.
4. The organization of the nursing service.

The personality of the nurse is an important factor in the success of the work, but equally important are the qualities which make her genuine—honesty, truthfulness, purity, sympathy, understanding and tolerance. Because of her opportunities for both direct and indirect influence, she needs, perhaps, more than the average amount of the qualities which make a woman fine and splendid.

The education of the nurse, as you know, has been a much mooted subject in the last few years. Just why there should arise the criticism that nurses are being over-educated, I cannot understand. We grant that education of itself, and for its own sake, falls far short of the mark whether in the education of the nurse, the doctor, the lawyer or any other professional person, but if education is given and received in the spirit of service, there is no such thing as over-education possible. Would that we had more of the education that recognizes not the superiority of the mind, but the need of training for the heart as well; putting 'soul,' as it were, into our work.

Strangely enough, one medical man who worked out a plan for railroading women through a six weeks course in nursing, was sending his son through a well known eastern medical school at the same time. One might expect there would be some danger of his son's being over trained for the medical field, if intelligent education means that.

I believe it is safe to say that the better educated the nurse is, the more intelligently she does her work, and the more intelligently she co-operates with the physician, recognizing where her work ends and his work begins.

It has been found, that hospital training furnishes an excellent foundation for public health work, but that it does not go far enough. However, the time is fast approaching when the nurse wishing to elect public health nursing in her training may do so. In the meantime, courses in public health nursing are necessary to give the nurse not only a socialized point of view, but an opportunity to make application of the principles of sanitation and social procedure to community problems. Such training further creates, if you please, an attitude of respect for co-workers in the field which is entirely essential to the common good and the common goal. The nurse during such post graduate training learns also of the resources of the state and how they may be utilized.

The State Board of Health is criticized, occasionally, for seeming to hold up appointments, because the applicants cannot meet the standards set by the state. These standards, it should be remembered, are an attempt to protect the people of the community against poor service. I can think of one community that would not think of employing an incompetent, poorly trained city electrician, but that could not see why they should not employ a local nurse with no public health training, and as they expressed it, train her themselves. The public health field is no place for experimentation. It is too rich in possibilities for good, to jeopardize its future by placing the work in the hands of a person totally untrained and inexperienced.

I can testify as one who did enter the field without public health training, that I blundered and I doubt if I was an exception to the rule.

The preparation of the community for the coming of the nurse is, I believe, much more important than we have heretofore realized. It seems to me as I look back, that in the terminology of the farmer, we have spent too much time on the seed-corn and too little time in the preparation of the field. Even today in many localities, there is a question whether the community appreciates the work of the nurse even after two or three years' work, and if she should happen to leave, there is a question if the work would go on.

A community should be prepared carefully and

I believe over a reasonably long period, so that not only the committee and the employing board, but the entire community will anticipate the nurse's coming and be intelligent as to what may be expected of her. The nurse is no fad, but an instrument for service if properly supported and directed. We know that a nurse, however well trained she is in public health work, is handicapped if she is thrown into a community that does not know and appreciate its own needs, or the services which she can render.

There is no one to blame quite so much as ourselves for this situation, however. We have worked *for* rather than *with* the people. Perhaps, health officers have done the same thing. The result is that when a misunderstanding arises, there is practically no one who can help us explain.

With due respect to the county health committee, I believe there might well be larger representation of the lay public on that committee.

This committee supports the county nurse almost without exception, but after all, two of the five members are county employees themselves and in a crisis are not entirely free from political influence, I imagine. Besides they are very busy people with little free time to give. I believe that since we as paid workers are in the main a transient group, we ought to shift more responsibility than we do back upon the community where it belongs. The success of the work should not rest with us as individual workers altogether and the sooner we give the citizens a larger opportunity to share the work with us, the better it will be for the work. The additional persons on a health committee should be representative—a cross section of the community, if you please, whose duties would *not* be to interfere with the technical performance of our work, but whose community influence would be felt, and whose willingness and ability to interpret our work to the general community would be a constant source of help.

Those of us who have known the joy of working with volunteer groups of civic minded men and women willing to give time and thought to the promotion of health, realize what the nurses, struggling on almost alone, miss. Some of the contributions of such a group include influence with public officials in charge of the funds (health appropriations have been saved more than once from being cut, by the pressure of such a group in one city with which I am familiar.) Such a

group is often willing to subsidize a project in an emergency or to advance an idea and give it prestige, when otherwise, it might not ever get over at all.

As time goes on, I hope we shall see a way to harness more completely these community forces heretofore not used and make them a power in the promotion of better health conditions.

The kind and scope of health program might easily be the hinge upon which the success of the work rests. Again we have been inclined to go faster than the community could follow. True, the community frequently leaves everything to the nurse and I have observed that there are nurses, who seem to enjoy carrying more than their share of the responsibility of the work. What the nurse should do, is to refuse to make decisions without the community's help. In beginning her work she should of course, make a study of her locality and the public should understand that she needs time to do this. When she knows whether it is a high infant mortality or a high tuberculosis death-rate, or whether it is health education in the schools that is calling for her attention, she should take the facts to her committee for their decision as to a health program. She should act as adviser, but not as judge and jury.

At present, the public health nurse is inclined to plunge into her work before she is acquainted even with the persons she will meet most frequently in her work, and generally without a study of health conditions. I hope the day is not far off when the approach to the work will be made on a basis of real knowledge of the needs and not on the basis of what some other locality is doing. The needs of different localities are not necessarily the same.

A successful health program should develop along with the community's consciousness of its needs. The work is new in many localities I grant, but the public health worker who succeeds is one who sees that the people at least keep within sound of the "band." Again, this is where the preparation of the community for the nurse's coming would dovetail with the kind and scope of program.

The last point—the organization of the nursing service is more important than it sounds. I believe that most of us are prone to think that organization has only to do with large groups. This is a mistaken idea. Where there are even but two nurses, the work will be more effectively

done if the service is organized. By organization, I mean that there should be one directing nurse with one or more nurses responsible to her. Such a person should be selected on the basis of training and experience and her ability to encourage the best work in those who work with her. It is not extravagance to provide for such a person, but a method that has been tested and found effective and sound.

It should be remembered that a nursing service is always strictly responsible to the Health Commissioner so far as policies are concerned, but so far as nursing principles and procedures and the daily program are concerned, the director of the nursing service must be free to carry them out as she sees fit and in the generally accepted way, which her training makes it possible for her to know and to do. Such a plan makes for unity of purpose, cooperation and good work and does not make for a variety of standards as numerous as there are members of a staff. In this way, one person is responsible.

No small part of the value of an organized nursing service is the burden of detail which it takes from the shoulders of the health officer. I fancy that he does not care more for those details than he does for the details of housekeeping in his own home, and I do not believe he wishes to concern himself about the nursing any more than he does about housekeeping, except to feel assured that it is satisfactorily done.

In a well organized nursing service, the supervising nurse knows the kind of work and instruction that is given in the homes. She sees that social and nursing technique are given daily attention, which is done through group discussion and demonstration or as individual conferences, and only when there is a directing nurse is it possible to promote and arrange such meetings. Cooperating agencies find it much easier to bring certain questions regarding nursing policies to a chief nurse than they do to try to make the rounds of an entire staff. Besides this, nursing affairs often require that one person be available to attend meetings where some nursing situation needs interpretation and one nurse on a staff might be available for such occasions, while an entire staff would not.

Organization of a nursing service, in other words, places responsibility on one person who because of her training and experience is qualified

to carry it and who is likewise able to share her larger experience and preparation with others. It makes also for more perfect coordination of nursing and medical service.

To sum up, I should like to leave with you the idea of the importance of sound preparation of the nurse for public health work.

Will you not think seriously about the importance of wider community interest in our work—not ours alone, but yours jointly with ours? I think it was on a California State Health Report that I saw a slogan that read something like this: "Communicable disease cannot be controlled with a health officer and a placard alone. It requires the intelligent cooperation of every person in the state to accomplish this."

May we not remain satisfied with our present health programs, but continue to study and find better and more effectual means of getting results.

And lastly, I hope that other Wisconsin cities will follow the lead of those who already have an organized nursing service. Beloit, La Crosse, Milwaukee and Racine, I believe, are the four cities having that distinction in this state. It is easier to begin right than it is to try to make things right.

<p>PUBLIC HEALTH NOTES FROM THE STATE BOARD OF HEALTH</p>

An epidemic of rabies was reported as continuing in northeastern Wisconsin where muzzling of dogs is being practiced by official mandate.

From Ohio came an inquiry from a parent seeking information as to the climate of Wisconsin in relation to hay fever. It was advised that many hay fever sufferers obtain relief by living during August and September in the Lake Superior region.

The state board met in emergency session in Milwaukee, May 22, and adopted special rules and orders for the control of smallpox in that city. Authority was given to quarantine certain infected areas until the inhabitants shall have been vaccinated. The commissioner of health of Milwaukee was empowered to make such rules for enforcing quarantine as he deems advisable.

At the instance of this department, after long and unsuccessful efforts to obtain cooperation, prosecution was brought against a physician for failure to report births. By stipulation the defendant is to file all unreported births at once, file all future reports within a five day limit, and pay the costs of the action, which amounted to \$35.61.

GOVERNOR VETOES MARRIAGE PROHIBITION

A bill providing that persons afflicted with active pulmonary tuberculosis shall be prohibited from contracting marriage in Wisconsin in the future, was vetoed on June 12th by Governor Blaine. The original bill as introduced by Senator Boldt, Sheboygan Falls, merely clarified the present statute defining more clearly feeble-mindedness. When it reached the Assembly that body added an amendment to include active tuberculosis among the prohibition clauses. It was this clause that brought the veto, the governor declaring that the wording of the bill was such as to bring it into direct conflict with the state's attitude towards divorce and social problems.

The Governor's veto of the Boldt marriage bill follows:

"TO THE HONORABLE, THE SENATE:

"I return herewith, without my approval, Bill No. 248, S.

"This bill amends section 2330 of the statutes, which prohibits certain persons from entering into a marriage contract. Presently, the law prohibits insane persons, epileptics and idiots from contracting in marriage, and this bill adds to such prohibition feeble-minded persons and persons afflicted with active pulmonary tuberculosis.

"I see no objection to the inclusion of feeble-minded persons, in view of the definition of the term as set forth in the bill. My objection is to the inclusion within such prohibition of persons afflicted with active pulmonary tuberculosis.

"From a medical standpoint, there is no objection to making persons afflicted with active pulmonary tuberculosis incapable of entering into a marriage contract, as harm can come from such union. It is true, however, that medical authorities are quite unanimous that pulmonary tuberculosis is not an inheritable disease. If persons so afflicted enter into a marriage and as a result thereof children are born, the danger arising is not from inheritance of the disease, but rather through the negligence of the parties in providing the proper sanitary conduct and following proper sanitary rules. It is well known that parents afflicted with pulmonary tuberculosis may raise children free from such tuberculosis, if they observe the proper sanitary rules. Therefore, while harm may come from such unions, the harm arises through failure to properly protect the child after birth.

"However, there is a larger problem involved in this proposal. It is a social problem.

"First, the provision making incapable of contracting marriage persons afflicted with active pulmonary tuberculosis is absolutely impossible of enforcement. Pulmonary tuberculosis is an insidious disease, oftentimes unknown to the afflicted, and unless medical authority is consulted, the afflicted may never acquire knowledge of his or her affliction until the disease has wrought its havoc. If the

afflicted consults medical authority, then the knowledge of the existence of such disease cannot be divulged by the physician. Therefore, public authority attempting to prosecute in such cases would find it utterly impossible to obtain the evidence of the disease, unless the party confessed thereto, and few people, even free from criminal charge, will confess to such an affliction. Clearly, therefore, the provision against pulmonary tubercular persons contracting marriage would go unenforced, and the only possible value it might have would be educational.

"But the social problem involved is another one. Marriages prohibited by this section are not voidable. Under the law they are absolutely void, and can be annulled at the suit of either party. It is no conjecture to suggest the harm and the injury that will come to innocent persons if this proposal becomes a law.

"A person afflicted with incipient active tuberculosis, being prohibited from contracting a marriage, may nevertheless illegally enter into marital relations, without the knowledge of the other party and without any opportunity for the other party to obtain the knowledge of such affliction, until the disease has reached that stage where the ordinary layman knows there is something wrong. Innocent parties, therefore, have entered into an illegal contract that is absolutely void.

"An action for annulment, of course, then lies. In such actions, however, assuming the innocent party to be the illegal wife, she has no protection as to property rights that have obtained. The man so afflicted may bring a suit to annul such marriage and leave the innocent woman without a single dollar for support, even long years after the original marriage, and after children have been born, and after the woman is incapable of earning a livelihood. In such actions there is no possibility for permanent alimony or division of property.

"Thus it will be readily appreciated that either party, the man or the woman, who has active pulmonary tuberculosis, having entered into the illegal contract, and having consummated that illegal marriage contract by actual marrying, may, when one tires of the other, bring a suit for annulment, thus leaving the innocent party in a position where restitution cannot be made, and where the injury cannot be compensated in award of damages.

"This sort of a situation would bring on a social condition most intolerable and most undesirable.

"Moreover, pulmonary tuberculosis is so insidious and so subtle and so difficult to discover that it would even be possible for the man or woman to set up a claim of having had such active pulmonary tuberculosis at the time of the marriage contract, and bring an action for the annulment of the marriage and succeed in defeating the rights of the innocent party, through a fraudulent practice, a fraud that is quite impossible to be discovered, either by the innocent parties or by the courts.

"While I favor reasonably liberal grounds for divorce, I am opposed to a law that makes it possible to substitute an annulment proceeding for a divorce proceeding, such as can be done if this bill becomes a law.

"Therefore this proposal is a menace to our social organization. It affords an opportunity for men and women to escape their marital relations through subterfuge and fraud, under an annulment proceeding. To the children and the innocent party, as to property interests and their future welfare, this proposal holds out only the most menacing possibilities.

"I therefore regard the social problem involved, and the results that will flow from this provision far more dangerous to our social organization than is the danger that may arise to the offspring of the pulmonary tubercular afflicted through neglect in observing sanitary regulations in the bringing up of such offspring. The social problem involved being paramount to the medical problem, this proposed act should not prevail.

Respectfully submitted,

JOHN J. BLAINE,
Governor."

Dated June 12, 1925.

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ORGANIZED 1841

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Table with 3 columns: County, President, Secretary. Lists officers for 90 Wisconsin counties including Ashland, Barron, Brown, Calumet, Chippewa, Clark, Columbia, Crawford, Dane, Dodge, Door, Douglas, Eau Claire, Fond du Lac, Grant, Green, Green Lake, Jefferson, Juneau, Kenosha, La Crosse, La Fayette, Langlade, Lincoln, Manitowoc, Marathon, Marinette, Milwaukee, Monroe, Oconto, Oneida, Outagamie, Pierce, Portage, Price Taylor, Racine, Richland, Rock, Rusk, Sauk, Shawano, Sheboygan, St. Croix, Trempealeau, Vernon, Walworth, Washington, Waukesha, Waupaca, Winnebago, Wood.

SOCIETY PROCEEDINGS

ASHLAND-BAYFIELD-IRON

The last meeting of the Ashland-Bayfield-Iron County Medical Society was held at Pureair Sanatorium, Bayfield, Friday, June 5th, with Dr. W. E. Fawcett, superintendent of the sanatorium, as the host. The meeting opened at 10 o'clock in the morning with a demonstration of artificial pneumothorax by Dr. Fawcett followed by a discussion on its use in tuberculosis. This was followed by a very excellent dinner for all the members present.

Following the meal a second artificial pneumothorax was done and a paper read by Dr. Fawcett on the work undertaken in tuberculous sanatoriums with particular reference to Pureair. Dr. H. G. Mertens gave a case report and a paper on the "Application of Blood Chemistry to Clinical Medicine." The twenty men present took part in a most enjoyable and instructive meeting; particular interest was shown in the progress of the sanatorium since the advent of Dr. Fawcett.

Dr. W. E. Fawcett was born and raised in Pittsburgh, Pennsylvania, and was graduated from the Medical Department of Western University of Pennsylvania, now the University of Pittsburgh, with honors in 1898. He is a member of the Alpha Chapter of the Phi Beta Pi Fraternity and practiced general medicine in and about Pittsburgh till 1912. At this time he became interested in tuberculosis and has since that time devoted his entire efforts to that branch of medicine. He has been a member of the staff of the Pennsylvania State Sanatorium at Cresson, was superintendent of Grandview Sanatorium at Oil City, and while at the latter place was chest examiner for the U. S. Public Health Service. Dr. Fawcett was connected with the National Home for Disabled Volunteer Soldiers at Dayton, Ohio, and more recently medical assistant at the Indiana State Sanatorium, which position he resigned to come to Pureair in September, 1923. Since that time Dr. Fawcett has added a great deal to the institution, including Quartz Light Therapy, the introduction of artificial pneumothorax and the beginning of an X-ray Department. His work among the patients, particularly for their social welfare, had been unstinted. Through his efforts everything has been done to make the patients' existence more comfortable and the purchase of a moving picture machine has contributed a great deal to the splendid morale of his patients.

BROWN-KEWAUNEE

The last regular meeting of the Brown-Kewaunee County Medical Society for the summer was held at the Beaumont Hotel, Green Bay, on June 1st. Dr. Francis D. Murphy, Milwaukee, presented a paper on "Hypertension and Nephritis, With Special Reference to Treatment," which was illustrated with lantern slides.

CRAWFORD

The Crawford County Medical Society held its annual spring meeting at the Court Room, Prairie du Chien, on May 21st. A full membership was present. Dr. Ed-

ward Evans, La Crosse, gave a talk on the "General Practitioner;" Dr. W. H. Guilford, State Board of Health, Madison, spoke on "Scarlet Fever Biologicals" and Dr. T. L. Harrington, Milwaukee, on "Points of Diagnosis in Pulmonary Tuberculosis." Each talk was very instructive and entertaining and the members of the society are very grateful for their helpful cooperation.—T. E. F.

DANE

The Dane County Medical Society held its annual picnic and meeting on July 1st at the Psychiatric Institute, Mendota. An interesting and invigorating program had been planned consisting of boating, fishing, swimming, and a baseball game. Preceding the supper an inspection tour was made of the hospital. During the course of the evening the members listened to an interesting medical program. The hospital staff spared no efforts in making the outing the success it was.

DOUGLAS

Scarlet fever and the results of study of the malady by medical men the world over were discussed at the regular monthly meeting of the Douglas County Medical Society held Wednesday evening, June 3rd, at the Androy Hotel, Superior. Papers dealing with scarlet fever and recent discoveries made through research work were read by members of the organization, following which a general discussion of the disease took place.

EAU CLAIRE AND ASSOCIATED COUNTIES

The following is a report of the activities of the Eau Claire and Associated Counties Medical Society since the first of the year:

Jan. 26th. A real interesting symposium was given before the society on brain injuries. Dr. A. S. Hamilton, Professor of Nervous and Mental Diseases, University of Minnesota, discussed the medical aspect, and Dr. J. F. Corbett, Associate Professor of Experimental Surgery, University of Minnesota, discussed the surgical condition. It was one of the most instructive evenings that the society has had in many years.

Feb. 23rd. Dr. Carl S. Harper, Jackson Clinic, Madison, gave a paper on "Chronic Leukorrhea, Cause and Treatment" and Dr. Arnold S. Jackson, Jackson Clinic, Madison, discussed the "Diagnosis and Treatment of Exophthalmic Goiter, With Special Reference to Lugol's Solution." These papers were very well received. The pathological conditions of the thyroid always excite a great deal of discussion and Dr. Jackson's paper brought out many points of interest to the general practitioners and surgeons at the meeting.

Mar. 30th. A symposium and a paper by Dr. W. H. Hengstler of St. Paul, was given on "Further Notes on the Role of Infection in Nervous Diseases." Dr. Merrill W. Wheeler of St. Paul collaborated with a paper on "The Ear, Nose and Throat as Foci of Infection." Both were very interesting subjects and very well given.

April 27th. Dr. R. G. Allison, Professor of Roentgenology, University of Minnesota, gave a paper on "Bone Tumors" and Dr. Frederic E. B. Foley of the Miller Clinic, St. Paul, gave a masterful paper on "The Embryology of Upper Urinary Tract Anomalies," citing

clinical cases with lantern slides. The paper presented by Dr. Foley was given at the meeting of the Minnesota State Medical Association the following day and it certainly deserves a great deal of comment. The embryology of the urinary tract is always a source of difficulty for students as well as graduates and it was clearly brought out by this paper. A great deal of work had been done by Dr. Foley. The other societies in the state would greatly benefit if they could hear his discussion.—H. M. S.

KENOSHA

Kenosha County Medical Society has devoted all the meetings this year, with one exception, to waging war on Socialized Medicine, Pseudo-Charity and Illegal Practitioners of Medicine.

The first meeting of the year was an open one. To this meeting were invited the City Manager, one member of the City Council, Health Commissioner, Poor Commissioner and one representative from each of the organizations interested in charity. These being the Community Chest, Service League and City Free Clinic.

An endeavor was made to establish a more mutual understanding and cooperation between these organizations and the medical fraternity. To these people the medical society stated their viewpoint and why they held it. They asked a more thorough investigation of all cases sent to the City Free Clinic and to all physicians for free treatment. As this privilege is very much abused, the Kenosha County Medical Society does not see why the profession of medicine should be imposed on for charity any more than lawyers, merchants, bankers or bakers. They suggested to the city manager that the police and firemen be not pauperized from a medical standpoint.

They called their attention to many errors of activity of the social workers under the direct supervision of the Health Department, Service League and City Free Clinic, wherein many of these social workers were making diagnosis, prescribing treatment, criticising and recommending doctors to patients coming under their observation.

Our Executive Secretary, Mr. Crownhart, attended this meeting and also a special meeting and luncheon in May to which the doctors from Racine and Walworth Counties were invited and at which time these problems, common to the members of the medical fraternity most everywhere, were discussed.

Our District Attorney, Mr. Powell, was also present at this meeting and offered to prosecute all illegal practitioners if the doctors would give him the names. He is making good on this offer.

Space does not permit mentioning more of our problems and our sincere endeavor to reestablish our former prestige as physicians and forever nullify the present-day-trend toward socialized medicine, so that we shall not have to concern ourselves with the usurpators of our professional rights and privileges, but rather be concerned about the care of the needy sick and injured.

We invite correspondence from all county medical societies having problems similar to ours.—W. C. S.

MARINETTE-FLORENCE

The Marinette-Florence County Medical Society enjoyed an eight o'clock dinner and a fine program Friday evening, June 12th. Dr. Austin O. Olmsted of Green Bay, presented the subject "Radium, Its Use, Limitations and Present Day Status." Dr. C. H. Boren, Marinette, read a most interesting paper on "Rickets." —M. D. B.

SHEBOYGAN

The members of the Sheboygan County Medical Society met in the dining room of the Association of Commerce Thursday evening, June 14th. Dr. W. S. Middleton, University of Wisconsin Medical School, addressed the doctors on the subject of tuberculosis.

WASHINGTON-OZAUKEE

At a meeting of the Washington-Ozaukee County Medical Society held at the Masonic Temple at West Bend on the afternoon of May 18th, the following program was presented: "A Brief Historical and Medical Sketch of the Hot Springs of Arkansas" written by Col. L. M. Maus, Intelligence Officer, was read by the secretary; "Cystinurea, With Report of a Case With Cystin Renal Stones," Dr. N. E. Hausmann, Kewaskum; "The Dick Treatment of Scarlet Fever," Dr. Bowman, State Epidemiologist, Madison; and Dr. O. B. Boek, district councilor, spoke to the society on the legislative program and other activities of the state society.

WINNEBAGO

Members of the Winnebago County Medical Society met on Wednesday, June 24th, at the Valley Inn, Neenah. The meeting was preceded by a dinner after which Dr. Alex Colvin, professor of surgery at the University of Minnesota, gave an address.

MILWAUKEE ACADEMY OF MEDICINE

The Milwaukee Academy of Medicine met at the Health Service Building on June 9th. Dr. Stanley J. Seeger gave a report on sixty-one cases from the Milwaukee Children's Hospital, illustrated by lantern slides. Dr. Carl A. Hedblom, Prof. of Surgery, University of Wisconsin, presented a paper on "Empyema and Its Surgical Treatment." This was also illustrated by slides.

NEWS ITEMS AND PERSONALS

Damages totaling \$10,000 were awarded Mrs. Mattie Korth, Milwaukee, recently against Drs. M. H. Rosenheimer, Sr., and Jr., Milwaukee, owners of the Lincoln Hospital. The plaintiff sought a sum of \$25,000, asserting the surgeons failed to remove a gauze sponge from her abdomen following an operation.

Dr. Eric Wisiol, of the Marshfield Clinic, who has been visiting his parents in Germany, returned to Marshfield on June 6th where he will again resume his practice.

Dr. Lewis Friek, Athens, has entered a plea of guilty in United States district court to charges of conspiracy to violate the Volstead act by selling his prescription

book to a druggist. The co-defendant, Arthur A. Gerl, Black Creek druggist, also pleaded guilty.

Extensive expansion of the medical school at the University of Wisconsin is forecasted in the passage of a bill to both houses of the legislature providing for a \$600,000 medical science building at the University to be built out of soldiers' rehabilitation funds as a memorial to soldiers in the world war.

Dr. J. J. Seelman, Milwaukee, was recently appointed a member of the Board of Health and Vital Statistics, to fill the unexpired term of Dr. Edward S. Hayes, Eau Claire, resigned, ending the first Monday in February, 1926, and for the full term, to succeed himself, ending the first Monday in February, 1933.

Dr. Edwin C. Bach, Milwaukee, has returned from eight months in Vienna where he did post graduate work in eye, ear, nose and throat clinics. Dr. Bach is now located at 1124 Wells Building where he has assumed the practice of Dr. George F. Zaun, deceased. Dr. Bach will specialize in eye, ear, nose and throat work. He was formerly located at 805—36th Street, Milwaukee.

Dr. Edward L. Miloslavich, professor of pathology at Marquette University, Milwaukee, addressed the American Anthropological Association (Central Section) on "Occurrence of Patency of Foramen Ovale Cordis in Different Peoples and Races," at the annual meeting held in Springfield, Illinois, April 26, 1925.

Dr. Fred H. Powers, formerly of Beaver Dam, is now located at Columbus. Last fall Dr. Powers sold his practice at Beaver Dam and took over an interest in a hospital at Christopher, Ill. The cyclone and the closing of the mines in that district caused such a collapse of general business conditions, that he decided to return to Wisconsin, choosing Columbus as his location.

Dr. R. W. Adams, who has practiced at Barron since 1922, is now established at Montevideo in western Minnesota.

Osteopaths can not write liquor prescriptions, Attorney General Herman Ekern held in a ruling submitted recently to Dr. Robert E. Flynn, secretary of the State Board of Medical Examiners of Wisconsin.

"The Volstead Act provides that no one but a physician holding a permit to prescribe liquor shall issue any prescription for liquor. It has been held that an osteopath is not a physician within the contemplation of the Prohibition Enforcement Act of Wisconsin and cannot issue prescriptions for intoxicating liquor."

Charged with practicing medicine without a license Hyland Slater-Wilson, Kenosha musician, who also conducts a health institute, was released on \$500 bail after an arraignment in municipal court. A charge of using the title of doctor without proper authorization is also held against the man.

The arrest is the first in the campaign being conducted by the Kenosha County Medical Society to rid the county of alleged illegal practitioners.

The health institute operator, it is alleged, claimed to be able to cure certain diseases by music. Members of the county medical society did not complain of this fact, but when Slater-Wilson attempted to prescribe salves and other properties the medicants made complaint.

Dr. and Mrs. A. O. Shaw, Ashland, returned from an intended five week's auto trip which lasted exactly one week. The Shaws left with the intention of enjoying a trip through the middle states and the East. In Indiana they ran into the torrid heat wave and turned right around and started for home. Dr. Shaw stated that he is perfectly satisfied with the brand of weather around Lake Superior and that never again will he think of points farther south in the good old summer time.

Dr. J. V. R. Lyman of Eau Claire, who fractured his left hip in a fall on the floor of his office laboratory last March, is convalescing slowly at his home.

The practice of the late Dr. DeForest A. Bronson, North Fond du Lac, was taken over by Dr. R. L. Prees, of Painesdale, Mich., on June 22nd. Dr. Prees is a graduate of the Medical School of the University of Wisconsin and of the University of Pennsylvania. He has been practicing medicine for about seven years.

Dr. A. M. Carr, medical director of schools for the board of education at Trenton, N. J., has been named as health officer for the city of Madison to succeed Dr. E. V. Brumbaugh, resigned. Dr. Carr will begin his duties at Madison on September 1st. He is a graduate of the University of Pennsylvania and Yale and in addition to this has made a special study of public health consisting of school hygiene, communicable diseases, and various other phases of public health.

Dr. Carr was formerly employed in public health work in Colorado after which he joined the forces of the American Child Hygiene Association. He also served as health officer at Bridgeport, Conn., for three years, during which time he made notable progress in school medical inspection, child hygiene, and development of corrective clinics.

Dr. Harry E. Purcell, Madison, will continue as acting health officer until Dr. Carr arrives.

The statute of limitations will not save Dr. Emil C. Schoene from trial for revocation of his license. About six years ago Dr. Schoene was convicted of having performed an illegal operation and was sentenced to five years in the house of correction. His principal argument in opposing the state's attempt to revoke his license was that the complaint should have been filed at the time of his conviction.

Posing as a magazine salesman and a dope fiend, H. E. Weston, special investigator for Richland county authorities, has uncovered evidence deemed sufficient to cause investigation by the United States grand jury in session at Madison. Weston alleged that C. M. Heth and R. D. Shireman, Richland Center veterinarians, sold him narcotics and liquor.

Dr. H. S. McGuinness has returned to Athens to practice medicine. He has been located at Medford for several years but removed to Tomahawk last year where he has been associated with Dr. L. M. Pearson.

Dr. A. J. Pullen, Fond du Lac, captain in the Medical Reserve Corps, graduated from the school of aviation medicine held at Mitchell Field, Long Island, during the period of May 1st to June 15th. Dr. Pullen is now one of the few officers of the Medical Reserve Corps designated as qualified to perform the physical examination for flying.

MARRIAGES

Dr. Russell Kurten, Racine, and Miss Gertrude Salisbury of Rosendale were married at Madison on May 25th.

The marriage of Dr. Eugene Neff, Madison, and Miss Ruth Perry occurred on June 2nd at Beverly, Mass., the home of the bride.

Dr. Chauncey Beebe of Sparta, son of Dr. and Mrs. Carl M. Beebe, and Miss Esther Putnam were united in marriage on June 5th at Ft. Atkinson.

DEATHS

Dr. William F. Baker, Wausau, passed away on June 4th at the Wausau Memorial Hospital, following an illness of nine weeks with typhoid fever, followed by complications. Doctor Baker was born November 10, 1879, at Hudson, Michigan. He lived and practiced in Wausau the last seven years, coming to that city from Birnamwood.

Dr. Baker was a member of the Marathon County Medical Society, the State Medical Society of Wisconsin and the American Medical Association. He is survived by his wife and two sons.

Dr. DeForest A. Bronson, North Fond du Lac, died suddenly at his home on June 10th following a heart attack. The deceased had been a prominent physician at North Fond du Lac for the past five years. Dr. Bronson was born in Warren, Pa., in 1878. He was graduated from the Chicago College of Medicine and Surgery in 1910 after which he practiced in Colorado for eleven years. Surviving him are his wife and two children.

Dr. Bronson was a member of the Fond du Lac County Medical Society, the State Medical Society of Wisconsin and the American Medical Association.

Dr. Edward Kinne, Elkhorn, was found dead in his office Wednesday afternoon, June 10th. Heart failure was the cause. Dr. Kinne was born at Sugar Creek, June 29, 1856. He studied medicine at the University of Virginia, graduating in 1896. He practiced three years in Richmond, Va., removing to Elkhorn in 1899. The doctor is survived by a son and a daughter. He was a member of the Walworth County Medical Society, the State Medical Society of Wisconsin and the American Medical Association.

Dr. George H. Ripley, Kenosha, died at his home on Saturday afternoon, June 13th, after an illness of two weeks. Dr. Ripley at the time of his death was sixty-four and was in the fourteenth year of his service as a member of the State Board of Medical Examiners. He had twice served as president of that board.

Dr. Ripley was born in the town of Oakfield, in Fond du Lac County, on October 22, 1860. He was the son of Charles T. and Lucy A. (Holton) Ripley, pioneers of that community. He had lived his youth on his father's farm and lived there until he was of age, acquiring his early education in the district schools. Later he attended Lawrence college, where he was graduated, and in 1889 he entered the Hahnemann Medical college in Chicago, from which he was graduated in 1891. He first entered practice in Chicago but later came to Kenosha in the early nineties.

Dr. Ripley was a member of the Kenosha County Medical Society, the Wisconsin State Homeopathic Society, the State Medical Society of Wisconsin, the American Institute of Homeopathy and a Fellow of the American Medical Association.

Dr. Paul Leo Hefty, New Glarus, died on June 15th after a stroke of apoplexy. Dr. Hefty was stricken with the heart attack while at the wheel of his car midway between Monticello and New Glarus. His sister, who had been riding in the rear seat of the car, took his place at the wheel and he was taken to the home of his brother-in-law, Dr. Henry Hoesly, where he passed away.

Dr. Hefty was thirty-three years old, a graduate of the New Glarus high school, of the Naperville College and the University of Wisconsin. He secured his medical education at Rush Medical College, Chicago, locating to practice his profession at New Glarus six years ago. He is survived by his wife, his father and mother, Mr. and Mrs. T. C. Hefty, brother, Dr. Clarence A. Hefty, and sisters, Mrs. Henry Hoesly and Lillian.

Dr. Hefty was a member of the Green County Medical Society, the State Medical Society of Wisconsin and the American Medical Association.

SOCIETY RECORDS

NEW MEMBERS

Rice, C. W., Lake Geneva.
O'Brien, W. T., Mauston.
Treadwell, C. L., Faith, S. Dakota.
Denser, Clarence H., Waukesha.
Reed, W. H., Lugerville.
Riley, Rose S., Park Falls.
Purdy, Frederick A., Winneconne.

CHANGES IN ADDRESS

Wiese, H. F., Eau Claire—Sivertsen Clinic, Minneapolis, Minn.
Adams, R. W., Barron—Montevideo, Minn.
White, A. G., Glenkindie, Aberdeenshire, Scotland—R. F. D. No. 5, Lynchburg, Va.
Powers, Fred H., Christopher, Ill.—Columbus.
McGuinness, H. S., Tomahawk—Athens.

Basic Plans for 79th Annual Meeting Announced; Timed Schedule to Be Followed with Socio-Medical Smoker on First Evening

An unusually wide selection of topics; carefully planned papers to conserve time; a timed program; a synopsis of all the papers in the preliminary program—these will be distinctive features of the 79th Annual Meeting of the State Medical Society of Wisconsin to be held at Milwaukee on Wednesday, Thursday and Friday, September 16th, 17th and 18th. The program committee is now holding weekly meetings to act as a whole upon all proposed material.

"We have sufficient suggestions now," declares Dr. J. L. Yates, Milwaukee, chairman of the committee, "to complete an attractive program—but we have not received all the suggestions that we want. We are anxious that this program shall have the widest personal selection so that the material will not only include a large number of speakers from the state, but so that it will also include diversity of topics that in itself will make a program worth while for all. With but few exceptions the papers will be confined to twenty minutes including illustrations.

"With a printed synopsis of each paper in the preliminary program we anticipate that the members will come to the meeting ready for valuable discussions and debate. The program as a whole is being rapidly shaped to the end we have in view and a most complete preliminary announcement will be made in the Journal of August 10th."

DELEGATES MEET TUESDAY

The first event of the 79th Annual Meeting will be the meeting of the House of Delegates to be held at Hotel Pfister on Tuesday evening, September 15th. The time for other meetings of the House will be fixed at this meeting.

The scientific program will open Wednesday morning at the Auditorium. The final program, to be published in the September issue of this Journal, will have an innovation in that the exact hour of all papers will be indicated. Ample time will be allowed for discussion and the timing will be followed strictly throughout the meeting. Members of the Program Committee fully realize that this convenience for the members will be worse than useless if not adhered to without change and accordingly promise that it will be followed without question.

THE SOCIO-MEDICAL SMOKER

The inauguration of a Wednesday evening smoker at which leading socio-medical problems are presented and discussed proved so successful at the Green Bay meeting that it will be made a feature of the meeting this year. The smoker will be held at Hotel Pfister on Wednesday evening, September 16th.

Three leading subjects will be briefly presented by speakers of state and national standing. Following these talks the Secretary promises a surprise feature after which the meeting will be open to general discussion in which all are urged to participate. This discussion affords an added opportunity for officers of the Society and members of the House of Delegates to learn the general sentiment of the profession on questions vital in medical organization.

SECRETARIES' LUNCHEON

Secretaries of the fifty-two county societies and members of the Council will have their annual luncheon on Wednesday noon, September 16th, at a place to be designated later. The luncheon will probably be held in the Auditorium building so that at least an hour may be had following the luncheon at which the officers may have a round table discussion.

BANQUET ON THURSDAY

The annual banquet will be held on Thursday evening, September 17th. Following the new precedent established a year ago, the sole address of the evening will be that of the President, Dr. Wilson Cunningham of Platteville. Following his address an adjoining hall will be thrown open for dancing and special entertainment.

OUR EXHIBITORS

The following firms have already made reservations for our 79th Annual Meeting:

- Abbott Laboratories, Chicago, Ill.
- Frank S. Betz Company, Hammond, Ind.
- O. Carlczek and Company, Chicago, Ill.
- DeShell Laboratories, Inc., Chicago, Ill.
- H. G. Fischer and Company, Milwaukee.
- Hanovia Chemical and Manufacturing Company, Newark, N. J.
- Horlick's Malted Milk Company, Racine, Wis.
- Huston Brothers Company, Chicago, Ill.
- E. H. Karrer Company, Milwaukee, Wis.

Kremers-Urban Company, Milwaukee, Wis.
 The Medical Protective Company, Fort Wayne,
 Ind.
 Mellins Food Company, Boston, Mass.
 Merrell-Soule Company, Syracuse, N. Y.

Pengelly X-Ray Company, Milwaukee-Minne-
 apolis.
 Radium Chemical Company, Pittsburgh, Penn.
 Roemer Drug Company, Milwaukee, Wis.
 W. B. Saunders Company, Philadelphia, Penn.
 Victor X-Ray Corporation, Chicago, Ill.

Dr. Chester M. Echols Writes of Tri-State Clinic Tour from Dublin

Dublin, Ireland,
 June 11, 1925.

My dear Mr. Crownhart:

Now that our tour is half finished, I shall keep my promise to send you a few comments.

There are nearly 750 in our party, about 80 per cent of whom are physicians. Every province of Canada is represented, and every state in the Union except Connecticut. The largest delegations come from Illinois, Wisconsin, New York, Iowa, California and Pennsylvania. Dr. Charles Mayo met us at Liverpool and has been with us constantly. Drs. Hugh Cabot, Franklin Martin and Woods Hutchinson joined us in London.

Before sailing we spent two days as guests of the University of Toronto and two days at Montreal as guests of McGill University. The former has not yet erected a monument to the excessively modest young man who discovered insulin, but will doubtless do so in the course of time. Banting admits that he got his "hunch" to study pancreatic extracts from reading an article in *Surgery, Gynecology and Obstetrics* after he had left college and gone into general practice in western Canada. Thereupon he abandoned his practice, returned to the laboratories at Toronto and was soon able to announce the discovery of insulin.

McGill University proposed an elaborate program for the two days of our visit, representing all the departments of surgery, medicine, and the specialties. We were all impressed with the high character of the work and teaching done at this famous medical center.

We put in a hectic week in London. The expression "freedom of the city" now has a new meaning for the members of our party. Not only did the thirty-four hospitals of London put on special clinics and demonstrations, but at all spare times, we were wined and dined to the point where all but the physically rugged began to pine for the simple life. It was the deluge of hos-

pitality against which our American ambassador had factiously warned us.

To give a brief resumé of surgical practices and teachings of London surgeons is not possible, for they vary greatly. Much of the work compares favorably with the best in America. The following observations, taken at random, may be of interest to many of your readers.

1. In England, anesthetics are given almost entirely by physicians, and not by trained women technicians. The uncompromising attitude of British coroners' juries in the event of death from anesthesia is said to be the chief reason.

2. Ether-oxygen is the favorite anesthetic. Ethylene, so far as I could learn, is not used at all in Great Britain or Ireland. Local and spinal anesthesia are employed only occasionally.

3. Green instead of white laboratory sheets are widely used in England and Ireland, the reason assigned being that green furnishes a background that is easier on the surgeons' eyes than a field of glaring white.

4. More scrupulous care is taken to prevent chilling of the patient while under anesthesia than is observed in many American clinics. Long, heavy woolen stockings cover legs and thighs, and often similar coverings are used for the upper limbs.

5. Most British and Irish surgeons use their fingers as a substitute for needle holders. "God is the best instrument maker," said Sir Berkely Moynihan, with a significant flourish of his fingers.

6. Many operating room procedures are dictated by considerations of economy, for the proportion of charity patients is enormously greater than in our country. Nearly all catgut used is prepared in the hospitals by the iodine method. Little chromicized catgut is employed. The wartime practice of using 3 to 5 per cent picric acid solution for skin disinfection on account of its

(Continued on page XXVIII.)

Blaine Signs Moul-Boldt Basic Science Bill: Board Appointed. Single Permit Bill Passed and Signed by Governor

Gov. John J. Blaine signed the Moul-Boldt Basic Science Bill, 27A, on June 10th. With the Governor's approval and the subsequent official publication the Basic Science Bill is now Wisconsin's Basic Science Law.

On June 18th Governor Blaine appointed as the first members of the board the following: Prof. F. G. Hall, Milton College, biologist, for the term ending April 1, 1927; Prof. Robert N. Bauer, Marquette University, chemistry department, for the term ending April 1, 1929; and Prof. M. S. Guyer, department of biology and zoology, University of Wisconsin, for the six-year term ending April 1, 1931. All appointments were confirmed by the Senate on June 18th without dissenting votes.

OFFICERS ELECTED

The first meeting of the new Board of Examiners in the Basic Sciences was held at Madison on Saturday, June 27th. At this meeting Prof. Robert N. Bauer, Marquette University, was elected President; Prof. M. F. Guyer, University of Wisconsin, was elected Secretary, and Prof. F. G. Hall, Milton, was selected as Treasurer.

USE OF TITLE RESTRICTED

As the legislative session closed, Gov. Blaine signed the Minier bill abolishing the chiropractic exemption of 1915 and substituting the basic science prerequisite and a special chiropractic examination.

The new law also provides that the license may be revoked for the same reasons as the law now specifies for physicians. Licenses expire annually unless renewed.

The new law also clarifies the old law with respect to the use of the title "Doctor." The law as it is now, as amended by the chiropractic bill, follows:

"147.02. (3) No person not possessing a license to practice medicine and surgery, osteopathy, or osteopathy and surgery, under section 147.05, shall use or assume the title 'doctor' or append to his name the words or letters 'doctor,' 'Dr.,' 'specialist,' 'M.D.,' 'D.O.,' or any other title, letters or designation which represents or may tend to represent him as a doctor in any branch of treating the sick."

DEBATE OVER CHIROS

When the Chiropractic Bill, 322A, was reached in the Senate on Friday, June 5th, Senator Wm. A. Titus, Fond du Lac, declared that the chiropractors in his district were satisfied with the Basic Science measure and that they did not desire the substitute measure. Senator Walter Polakowski, Milwaukee, declared that what the chiropractors wanted was a puzzle to him. Senator O. H. Johnson, Gratiot, then moved the rejection of the substitute amendment, declaring that it was in contradiction to the health laws of the state.

"The original Chiropractic Bill as passed by the Assembly is agreeable to all," declared Senator Joseph Padway, Milwaukee. "But if we pass the substitute measure we might just as well wipe out our health laws. The substitute measure would give the chiropractor every right of a physician and surgeon including the right to treat infectious diseases. On the other hand, he could not give and would not give antitoxin for diphtheria nor could he or would he vaccinate for small pox.

"The substitute measure goes further than that and gives naprapaths this same wide and universal, unlimited power.

"Subsection 9 of this substitute bill provides 'Chiropractors licensed to practice in Wisconsin shall be bound by all general health laws of the state in so far as their practice is affected and shall further comply with respect to the filing with local or state health officers of reports of any character and particularly in the matter of contagious and infectious diseases.'

"Never was there a more dangerous measure proposed as affects the health of the people of this state. If chiropractors have a sphere it must be limited as is their practice and this is provided in the original bill.

"Again the substitute bill recognizes naprapaths, something this Senate refused to do just last week by a vote of 23 to 5. It goes farther than that and gives the naprapaths the same rights under subsection 9 as are given to the chiropractors.

"Again the original bill preserves and clarifies the present law which forbids any but one licensed to practice medicine or surgery or osteopathy the right to the title 'Doctor.'



SENATOR H. E. BOLDT,
Sheboygan Falls

"This subsection in the original bill has been dropped from the substitute measure and this omission is nothing short of vicious.

"FRAUD UPON THE PUBLIC"

"The title 'Doctor' before the name of the man on an office window indicates to the average person that the man with that title is either a physician with seven years of training, or a dentist. This substitute would give that title to a man who might have only eighteen months' preparation. To do so would be to commit a fraud upon the public. This substitute measure should be rejected by an overwhelming vote.

"When I saw this amendment I wrote a letter to Dr. Harper, our State Health Officer, asking him for information on this subject. I quote now from his reply.

"In my judgment," says Dr. Harper, "if this substitute amendment should be enacted into law, it would put Wisconsin back to where it was about forty years ago in the prevention and control of communicable diseases, and it would be but a short time until we could be at the foot of the ladder in health and welfare measures as applied to our people.

"Never in my candid judgment has a more dangerous measure been introduced in a State Legislature of Wisconsin as far as the general welfare is concerned, than the principles suggested in the points referred to in the substitute amendment to Bill 322-A. If I did not enter a vigorous protest against its passage I would certainly feel that I had permitted gross negligence to occur in my official duties.

"Should this substitute amendment be enacted into law the Wisconsin statutes would contain the unusual proposition that a man might be licensed to treat diseases but prohibited from using the remedies in treating these diseases that have been scientifically laid down and recognized as essential



ASSEMBLYMAN FRED E. MOUL,
Burnett

throughout the civilized world. I make no objection, however, to the original bill 322-A as passed by the Assembly. There is no serious public health problem involved therein."

The fight against the substitute measure was then continued by Senator Harry Sauthoff, Madison.

SENATOR SAUTHOFF OPPOSES SUBSTITUTE

"This substitute measure," declared Senator Sauthoff, "is so serious that we should not pass it



DR. OTTO B. BOCK
Sheboygan

He first proposed the Basic Science Law

over either superficially or lightly.

"I want to read again from this substitute bill subsection 9, which says, 'Chiropractors licensed to practice in Wisconsin shall be bound by all general health laws of the state in so far as their practice is affected and shall further comply with respect to the filing with local or state health officers of reports of any character and particularly in the matter of contagious and infectious diseases.'

"This would give the chiropractor the right to treat infectious and communicable diseases. It would mean that those who practice by manipulating the vertebrae would have the power to treat diphtheria, small pox and scarlet fever and other communicable diseases by that method.

"I have but recently returned from Milwaukee where they are having an epidemic of small pox. When I was in Milwaukee they were vaccinating over 10,000 a week. Certain blocks of the city were segregated and the epidemic was being brought under control.

"But here we have chiropractors who do not believe in contagious and infectious diseases and here is a bill proposing to advocate that theory in

law. We must not, and we will not, take this backward step.

"BACK TO THE MIDDLE AGES"

"I hold a telegram from Doctor Koehler, Commissioner of Health of the city of Milwaukee, in which he declares that contagious diseases in Milwaukee would be out of all control if we permit

THE DOCTOR BOCK OF 1867

To those members, who have been following the progress of the various bills that have been introduced in the State Legislature the last few years, pertaining to the Medical Practice Act, it might be interesting to know that this is not the first effort to have such laws passed in this state.

The Sheboygan County Medical Society was organized August 19, 1867, with the following officers:

President—Dr. Louis Bock.
Vice-President—Dr. H. J. Young.
Rec. Secretary—Dr. A. Clark.
Corr. Secretary—Dr. W. B. Hanson.
Treasurer—Dr. A. F. St. Sure.

It was moved by Dr. Young that a committee of three be appointed to draw up a fee bill and a code of ethics, at which Dr. Bock remarked that the first prerequisite to the practice of Medicine was that a man be a Gentleman, and if he were a Gentleman, no code of ethics was necessary.

When the society met again on Sept. 30th, (1867), to adopt the Constitution and By-Laws, Dr. Bock, father of Dr. Otto B. Bock, presented the following Resolution which was adopted:

"Resolved, That any person practicing Medicine or Surgery in this County, who fails to become a member of this Society within six months from the date of its organization, shall be considered a quack by the Society."

Again on May 3rd, 1869, at the regular meeting, at the suggestion of Dr. Louis Bock, it was "Moved and carried that the Society resolve itself into a committee to urge the necessity of having the next Legislature pass laws for the protection of the people of the State from Empiricism in the practice of Medicine and Surgery."

Evidently the Committee was too loosely constructed to function properly for at a meeting held in Plymouth Jan. 3rd, 1870, it was "Moved and carried that the Secretary be directed to furnish the Secretary of the State Society and also the Members of the Assembly from Sheboygan County with copies of the resolution passed by this Society on May 3rd, 1869, in reference to a law to protect the people of the State from Empiricism, in the practice of Medicine and Surgery."

this substitute bill to pass. Doctor Koehler declares that it would take us back to the middle ages when thousands died from small pox and similar diseases. Doctor Koehler holds an important position. He is head of the Milwaukee



SENATOR HARRY SAUTHOFF,
Madison

Health Department which spends more money and to which more money is appropriated every year than we appropriate to our State Board of Health. His statements must be taken at a high evaluation.

"I hold in my hand now," continued Senator Sauthoff, "a letter from Doctor Harper of the State Board of Health in which he declares that people live longer in Wisconsin at the present time than in any other state in the United States with the sole exception of Kansas. He declares that if this substitute bill is passed we may have the honor of going to the foot of the list.

"Doctor Harper declares that 'there are such serious possibilities in this substitute that if I did not call your attention to it, I certainly would feel that I had permitted gross negligence to occur in my official duties.'

"Doctor Harper says that he raises no objection to the original bill as passed by the Assembly but hopes that this substitute amendment will be defeated. To pass it is to permit chiropractors and naprapaths, who do not believe in serums and antitoxins, to treat those who are afflicted with disease which we all recognize can only be prevented and treated effectively through the use of

serums and antitoxins. To pass this substitute amendment is to declare that we are opposed to all that science has given us—to the great advancements that have been made in the scientific treatment of infectious and communicable diseases. I hope that this substitute amendment will be defeated."

Senator Wm. L. Smith, Neillsville, then secured recognition of the chair to defend the chiropractic substitute.

"I hope that the substitute amendment will be adopted," declared Senator Smith. "Adopt the substitute and then kill the bill, if we must, but do not pass the original bill."

The vote was then taken on the question, "Shall



SENATOR JOSEPH PADWAY,
Milwaukee

the substitute amendment be rejected?" On this question the amendment was rejected 21 to 5. The roll call follows:

To reject the substitute amendment: Barker, Boldt, Cashman, Casperson, Chase, Daggett, Englund, Garey, Gettelman, Heck, Hull, Johnson, Keppel, Mehigan, Morris, Padway, Polakowski, Quick, Sauthoff, Schmann and Titus—21.

For the substitute amendment: Bilgrien, Carroll, Lange, Smith and White—5.



SENATOR C. B. CASPERSON.
Chm., Com. on Public Welfare,
Frederic

Paired: Senator Roethe against the substitute; Senator Hunt for the substitute.

Absent and not voting: Senators Barber, Severson, Staudenmayer and Teasdale—4.

When the substitute failed Senator Smith moved that the original bill be killed. This the Senate refused to do by a vote of 20 to 7.

The roll call on the question of killing the bill follows:

To kill the bill: Senators Carroll, Cashman, Gettelman, Lange, Schumann, Smith and White—7.

For the original bill: Senators Barker, Boldt, Casperson, Chase, Daggett, Englund, Garey, Heck, Hull, Johnson, Keppel, Mehigan, Morris, Padway, Polakowski, Quick, Sauthoff, Severson and Titus—20.

Absent and not voting: Barber, Hunt, Kemp, Roethe, Staudenmayer and Teasdale—6.

"DOCTOR" AMENDMENT KILLED

When the Senate refused to kill the original bill, Senator Smith proposed an amendment which would give chiropractors the right to be called "Doctor." Senator Smith spoke in favor

of this amendment declaring that no reason existed why chiropractors should not have this title.

"When a man gets sick," declared Senator Wm. F. Quick, Milwaukee, "he will spend his last nickel. I for one do not like to have any more places where he can go to be bunked. When a sick man sees the title 'Doctor' he has in mind one who is licensed by the state after a definite period of education. Just as I would not permit a man to be called lawyer, who did not have an education as a lawyer, so I declare against permitting a man to be called doctor when in fact he does not possess that education."

At this point Senator Max W. Heck, Racine, moved rejection of the amendment permitting chiropractors to be called "Doctor" and demanded a roll call. The amendment was then rejected 19 to 6.



SENATOR J. L. BARBER, M.D.,
Marathon

The roll call on the "Doctor" amendment follows: To kill the amendment: Senators Barker, Boldt, Carroll, Casperson, Chase, Englund, Garey, Heck, Hull, Johnson, Keppel, Mehigan, Morris, Padway, Polakowski, Quick, Sauthoff, Severson and Titus—19.



ASSEMBLYMAN A. J. McDOWELL, M.D.,
Soldiers Grove

For the amendment: Cashman, Daggett, Lange, Schumann, Smith and White—6.

Absent and not voting: Barber, Bilgrien, Gettelman, Hunt, Kemp, Roethe, Staudenmayer and Teasdale—8.

Following the killing of the amendment the bill was advanced without a roll call. Later in the morning Senator Boldt asked unanimous consent that the bill be put upon its final passage. No objection was raised and the original bill as passed by the Assembly was then concurred in by the Senate.

PHARMACY BILL AMENDED

On the same morning the Senate took action on the Staab Pharmacy Bill, which proposed that in the future only registered pharmacists might own drug stores. Present ownership was exempted.

When the bill was reached on the calendar, Senator Harry Sauthoff, Madison, proposed an amendment including those licensed to practice medicine and surgery with pharmacists as those who might own drug stores in the future. The amendment was adopted without discussion and the bill was successively advanced and passed. A motion by Senator Merritt F. White, Winneconne, to kill the bill was defeated 19 to 7.

The roll call on the question of killing the Pharmacy Ownership Bill follows:

To kill the Pharmacy Ownership Bill: Senators Bilgrien, Casperson, Chase, Hull, Kemp, Teasdale and White—7.

For the Pharmacy Ownership Bill: Senators Boldt, Cashman, Daggett, Englund, Gettelman, Heck, Johnson, Keppel, Lange, Mehigan, Morris, Padway, Polakowski, Quick, Sauthoff, Schumann, Severson, Smith and Titus—19.

Absent and not voting: Barber, Barker, Carroll, Garey, Hunt, Roethe and Staudenmayer—7.

PERMIT BILL PASSES ASSEMBLY

By a vote of 65 to 3 the Assembly placed Bill 466A upon its final passage during the first week in June. This bill, endorsed by the State Medical Society and championed by Assemblyman George Meggers of Clintonville, proposed to com-



ASSEMBLYMAN GEORGE W. MEGGERS,
Clintonville

bine all privileges for physicians or druggists under the State Prohibition Enforcement Act into one permit at a single fee of \$10.00. The permit would correspond to the federal permit, instead of having three state permits, two of which cost \$10.00 each.

The roll call on passing the Permit Bill, 466A, follows:

To kill the bill: Dieringer, Edwards, and Warden—3.

To pass the bill: Barber, Blanchard, Brooks, Busse, Caldwell, Cieszynski, Coleman, Cushman, Dettinger, Dorwin, Duncan, Eber, Ellenbecker, Engel, Frederick, Grimstad, Hanson, Hinkley, Hoffman, Holly, Huckstead, Hutchison, Jensen, Johnson, E. H., Kamper, Kiesner, Koenig, Carl, Krause, Laffey, Larson, J. L., Larson, Nels, Lawson, Leicht, McDowell, Mentink, Millar, Minier, Moseley, Moul, Nelson, Olsen, O. C., Olson, W., Pahl, Perry, Petersen, Prescott, Price, Raihle, Saugen, Schultz, Sellers, Shearer, Slack, Smith, A. E., Smith, H. H., Sonnemann, Staab, Stokes, Swanson, Thompson, H. F., Thompson, J. C., Thorp, Vincent, Weber, Wood, and Mr. Speaker (Satchjen)—65.

SENATE PASSES PERMIT BILL

The permit bill was not reached in the Senate until Wednesday noon, June 10th. At that time the bill was advanced by a viva voci vote. After a recess the Senate placed the bill upon its final passage that evening by a vote of 24 to 0. The roll call follows:

To pass the single permit bill: Bilgrien, Carroll, Cashman, Casperson, Chase, Daggett, Englund, Garey, Gettelman, Heck, Hull, Johnson, Kemp, Morris, Padway, Polakowski, Quick, Roethe, Sauthoff, Severson, Smith, Staudenmayer, Teasdale and White—24.

Against the bill—none.

Absent and not voting—Barber, Barker, Boldt, Hunt, Keppel, Lange, Mehigan, Schumann and Titus—9.

New Law Enacted Relative to Physicians' and Druggists' Permits; Effective January 1, 1926

Governor Blaine has signed Bill No. 466A abolishing the triplicate permit system for physicians under the State Prohibition Enforcement Act. This law becomes effective on January 1st, 1926, and substitutes a single permit for the future. In abolishing the triplicate permit system the law also eliminates one fee of \$10.00 and but a single fee of \$10.00 remains.

The new law follows:

(165.01) (8m) Nothing in this chapter shall be construed to require any physician or druggist to procure more than one permit. A physician's permit shall authorize and permit the person to whom issued, subject to this chapter and rules and regulations prescribed by the commissioner:

- (a) To prescribe liquor;
- (b) To procure liquor to be administered to patients for medical purposes in cases of emergency;
- (c) To obtain liquor to be used in compounding medicines;
- (e) To procure alcohol to be used for sterilizing instruments;

(8n) A druggist's permit shall, subject to this chapter and rules and regulations prescribed by the commissioner, authorize and permit the person to whom issued:

- (a) Use liquor in the preparation of United

States Pharmacopoeia or National Formulary compounds and medicated prescriptions which are unfit for beverage purposes;

(b) Sell liquor to persons holding permits for non-beverage purposes in quantities of less than five wine gallons;

(c) Sell alcohol in quantities not exceeding one pint medicated per one of the formulae provided in the regulations promulgated under the national prohibition act.

(d) Sell liquor on physicians' prescriptions in accordance with the regulations promulgated under the national prohibition act.

(165.01) (8) (a) Every application for a permit shall be accompanied by a fee of ten dollars and the written approval or disapproval of the district attorney of the county in which the permit is to be used. A separate permit and bond shall be required for each place of business. No fee shall be required for a permit to obtain wine for sacramental or religious rites, nor shall any fee be required of a dentist to enable him to secure alcohol for the purpose of sterilizing his instruments.

There is no state law nor board regulation which requires a person who sells milk or other dairy products to obtain a state license. There may, however, be local ordinances for such license.



THE JOURNAL BOOK SHELF

A Diabetic Manual. By Elliott P. Joslin, M. D., Clinical Professor of Medicine, Harvard Medical School; Consulting Physician, Boston City Hospital; Physician to New England Deaconess Hospital. For the mutual use of Doctor and Patient. Illustrated. Third Edition, thoroughly revised. Lea & Febiger, Philadelphia and New York, 1924. Price \$2.00.

A Textbook of Materia Medica for Nurses. By A. L. Muirhead, M. D., Late Professor of Pharmacology, Creighton Medical College, Omaha, Nebr., and Edith P. Brodie, A. B., R. N., Instructor in Material Medica and Therapeutics, Washington University School of Nursing, St. Louis, Mo. Second Edition. C. V. Mosby Company, St. Louis, 1924. Price \$2.00.

The Diagnosis of Children's Diseases. With special attention to the diseases of infancy. By Prof. Dr. E. Feer, Director of the University Children's Clinic, Zurich, Switzerland. Translated by Carl Ahrendt Scherer, M. D., F. A. C. S. J. B. Lippincott Company, Philadelphia, London, Montreal, 1925.

The Physiology of Mind. An interpretation based on Biological, Morphological, Physical and Chemical Considerations. By Francis X. Dercum, M. D., Ph.D., Professor of Nervous and Mental Diseases in the Jefferson Medical College, Philadelphia. Second edition, reset. 12mo of 287 pages. Philadelphia and London. W. B. Saunders Company, 1925. Cloth, \$3.50, net.

Safeguarding Children's Nerves. A Handbook of Mental Hygiene. By James J. Walsh, M. D., Ph.D., Sc.D., Professor of Physiological Psychology, Cathedral College, and John A. Foote, M. D., Professor of Diseases of Children, Georgetown University Medical School, with a Foreword by Honorable Herbert Hoover. Cloth, price, \$2.00. Pages 272, with illustrations. Philadelphia: J. B. Lippincott Company, 1924.

Report on Second International Congress of Military Medicine and Pharmacy. By Commander William Seaman Bainbridge, M. D., Rome, May-June, 1923. Reprinted from the Military Surgeon.

Diseases of the Heart. By Henri Vaquez, M. D., Professor of the Faculty of Medicine of Paris. Translated and edited by George F. Laidlaw, M. D., Associate Physician to the Fifth Avenue Hospital, New York City. Introduction by William S. Thayer, M. D., Johns Hopkins Hospital, Baltimore, Md. Octavo volume of 743 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$8.50, net.

Lectures on Pathology. By Ludwig Aschoff, M. D., Professor of Pathologic Anatomy, University of Freiburg, Germany. Delivered in the United States, 1924. With thirty-five illustrations. Paul B. Hoeber, Inc., New York, 1924. Price, \$5.00.

The Inheritance of Acquired Characteristics. By Paul Kammerer, M. D. Boni and Liveright, Publishers, New York.

BOOKS RECEIVED FOR REVIEW

The Cornell Clinic, 1921-1924. Medical service on a self-supporting basis for persons of moderate means. A report issued by the Committee on Dispensary Development of the United Hospital Fund of New York, Michael M. Davis, executive secretary. April, 1925. New York City.

Proceedings of the International Conference on Health Problems in Tropical America. Held at Kingston, Jamaica, B. W. I., July 22 to August 1, 1924, by invitation of the Medical Department, United Fruit Company, Boston, Mass.

Lectures, Clinics and Discussions on Electro-Physiotherapy. Held at Logan Square Masonic Temple, Chicago, October 20 to 24, 1925, under the auspices of H. G. Fischer & Company, Inc., Chicago.

Infections of the Hand. A guide to the surgical treatment of acute and chronic suppurative processes in the fingers, hand and forearm. By Allen B. Kanavel, M.D., Prof. of Surgery, Northwestern University Medical School; attending surgeon, Wesley Memorial Hospital, Chicago. Fifth edition, thoroughly revised. Illustrated with 196 engravings. Price, \$5.50. Lea & Febiger, Philadelphia and New York, 1925.

A Practice of Gynecology. By Henry Jellett, M.D., (Dublin University), F.R.C.P.I., consulting obstetrician to the Department of Public Health of New Zealand; consulting gynecologist Rotunda Hospital, Dublin; extern examiner in midwifery and gynecology, Dublin University, Royal University of Ireland, Victoria University, Manchester, and the University of New Zealand. Fifth edition with 417 illustrations and 15 coloured plates. Price \$8.50. Lea & Febiger, Philadelphia, 1925.

A Manual of Physical Diagnosis. By Austin Flint, M.D., LL.D., late professor of the principles and practice of medicine and of clinical medicine in Bellevue Hospital Medical College. Ninth edition, revised by Henry C. Thacher, M.S., M.D., attending physician, Lincoln Hospital and assistant attending physician, Roosevelt Hospital, New York. Illustrated. Price \$3.25. Lea & Febiger, Philadelphia and New York, 1925.

Medical Clinics of North America. Boston Number, May, 1925. Volume VIII, Number VI. Octavo of 278 pages and 47 illustrations and complete index to Volume VI. Paper, \$12.00; cloth \$16.00. W. B. Saunders Company, Philadelphia and London.

Abt's Pediatrics. By 150 specialists. Edited by Isaac A. Abt, M.D., Prof. of diseases of children, Northwestern University Medical School, Chicago. Volume VII contains 879 pages with 70 illustrations. Cloth, \$10.00 per volume. W. B. Saunders Company, Philadelphia and London, 1925.

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1. Suprarenalin 1 part
Zinc Stearate (Comp).....100 parts
Heavy Magnesium Carbonate.....900 parts
Mix. Triturate well.
2. Suprarenalin..... 1 part
Zinc Oxide100 parts
Bismuth subcarbonate400 parts
Mix. Triturate well.
3. Suprarenal gland substance..... 1 part
Zinc Stearate 20 parts
Zinc Oxide 80 parts
Mix. Triturate well.
4. Suprarenalin 1 part
Bismuth subcarbonate300 parts
Zinc Oxide300 parts
Zinc Stearate200 parts
Mix. Triturate well.



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Modern Surgery. General and Operative, by J. Chalmers Da Costa, M.D., LL.D., F.A.C.S. Samuel D. Gross, Professor of Surgery, Jefferson Medical College, Philadelphia. Ninth edition, revised and reset. Octavo of 1527 pages with 1200 illustrations, some in colors. Cloth, \$10.00 net. W. B. Saunders Company, Philadelphia and London, 1925.

Surgical Clinics of North America. New York Number, April, 1925. Volume V. Number 11, 337 pages with 105 illustrations. Paper, \$12.00; cloth, \$16.00 net. W. B. Saunders Company, Philadelphia and London.

Collected Papers of the Mayo Clinic and the Mayo Foundation, Rochester, Minn. Octavo of 1331 pages, 254 illustrations. Cloth, \$13.00 net. W. B. Saunders Company, Philadelphia and London, 1925.

Physical Diagnosis of Diseases of the Chest. By Joseph H. Pratt, A.M., M.D., and George E. Bushnell, Ph.D., M.D. Octavo of 522 pages with 166 illustrations. Cloth, \$5.00 net. W. B. Saunders Company, Philadelphia and London, 1925.

BOOK REVIEWS

WILLIAM A. MOWRY, M. D.,
Editor

Any scientific publication reviewed in this column may be obtained for inspection. Orders for such inspection should be directed to Mr. W. M. Smith, Librarian, Medical Library, University of Wisconsin, Madison, and should be placed through your local librarian wherever possible. Where there is no local librarian orders may be sent direct. These new books will be loaned for an inspection period only.

Medical Education—A Comparative Study. By Abraham Flexner, Secretary, General Education Board, New York. The Macmillan Company, New York City, 1925.

Abraham Flexner came into prominence in the field of medical education in 1910 upon the publication of a large monograph on Medical Education in the United States and Canada. This study was conducted under the auspices of the Carnegie Foundation and the monograph was published by this corporation. Detailed summaries were given of the educational standards, facilities, and resources for each of the medical schools in the country and the general situation were discussed at length from several points of view. Although reform in methods of medical education had then begun there were still many schools with little excuse for existence and few schools with resources at all adequate to meet modern demands. The publication of this monograph did much to further the closing up of inferior schools and the improvement of other schools. In 1912 the Carnegie Foundation published the results of a corresponding study by Flexner on Medical Education in Europe. In this study special attention was paid to medical education in Great Britain, France, and Germany. The conditions in the latter country appealed especially to Flexner. Last year the Macmillan Com-

pany, under the auspices of the General Education Board, published a translation of a monograph written by Billroth about fifty years ago on "The Medical Sciences in the German Universities, a study in the history of civilization," in which the German scientific ideals are presented by a master. In 1923, Sir George Newman, Chief Medical Officer of the Ministry of Health and of the Board of Education of Great Britain, published under the auspices of the Ministry of Health an exceptionally valuable study on "Recent Advances in Medical Education in England."

The new monograph of Flexner is a worthy addition to this important group of studies on medical education. He discusses certain general problems of medical education, especially from the point of view of medicine as a science allied to physics, chemistry, and biology. He discusses the changes in medical education which have taken place in Europe and America since the publication of his earlier monographs and compares American with foreign conditions of pre-medical and medical education. He believes that in the reorganization of medical education in this country Americans have done well in endeavoring to combine the practical training of the French and English "clinical" systems with the productively scientific German system but have made the mistake of over-organization and over-standardization. No one interested in the present problems of medical education should fail to read this instructive study. It is essentially a study of methods rather than of results.

—C. R. B.

Chemical Dynamics of Life Phenomena. By Prof. Otto Meyerhof. J. B. Lippincott Company, Publishers, Philadelphia and London.

This little volume consists of five lectures delivered before research workers in various laboratories. Cell-respiration is the central theme, and the author's own studies, together with those of Otto Warburg, are interpreted in harmony with the results of the so-called Cambridge School, headed by A. V. Hill, which looks to the sugars alone, after conversion into lactic acid, as the source from which the muscles derive their energy. In passing, it should be remarked that various American physiologists, notably Doctor Graham Lusk, deny the validity of this "lactic acid" theory, and maintain that animals can also secure their necessary energy from fat. The book in hand is devoted to discussions of cell-respiration, the chemical relations between respiration and fermentation, the transformation of energy in muscle, and the energetics of cell processes in general. It is a stimulating and valuable discussion, of interest to all students of metabolism.—M. F. G.

A Manual of Diseases of the Nose, Throat, and Ear. By E. B. Gleason, M. D. W. B. Saunders Company, Publishers, Philadelphia and London.

This manual was written to supply students, and general practitioners with the essential facts of Rhinology, Laryngology, and Otology.

In a very concise form the more important facts of the anatomy, physiology, and pathology of the upper respiratory tract and ear have been described. He has also explained the details of the examinations, diagnosis,

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While the condition of the baby will guide the physician in regard to the amount and intervals of feeding, the usual custom is to give one to three ounces every hour or two until the stools lessen in number and improve in character. The food mixture may then be gradually strengthened by substituting one ounce of skimmed milk for one ounce of water until the amount of skimmed milk is equal to the quantity of milk usually employed in normal conditions.

Mellin's Food Co., 177 State Street Boston, Mass.

and treatments of nose, throat and ear conditions. At the end of the book he has listed a collection of the more common formulas which he has found of value in the treatment of many upper respiratory conditions.

The description of the operative technique is as a whole very good but we can not agree with his opinion that a tonsillectomy in adults is performed with greater safety under a general ether anesthetic.

Again it would seem better that the author should discard the use of the saw in removal of spurs and exostoses of the septum, which are far better removed by a submucous resection.

He also persists in describing the two approaches for a tracheotomy, the high and the low operation. The high approach is merely an incision through the cricothyroid membrane into the larynx, which is to be condemned because of the great danger of stenosis of the larynx which frequently results. The low operation, that is entering the trachea through the second and third rings, is the only method of choice, and the high approach should be discarded from all text books.

It is as a whole an excellent manual which should be of value not only to the under graduate, but as a quick reference work for the busy practitioner.—W. M. N.

Insanity and Law. By H. Douglas Singer, M.D., M.R.C.P. (London). Professor of Psychiatry, University of Illinois, College of Medicine; formerly State Psychiatric Institute in Illinois; and William O. Krohn, A.M., M.D., Ph.D., author of *Practical Lessons in Psychology*; *First Book in Physiology and Hygiene*; formerly Resident Psychologist at Kankakee State Hospital; Head of Department of Psychology at Western Reserve University and at the University of Illinois; six years Medical Juror in Cook County (Chicago) Insanity Court. Cloth, pp. 437. P. Blakiston's Son & Co., Philadelphia, 1924.

In this book a need of long standing is filled. It embodies an outline of psychiatry that gives an understanding of the subject to the lawyer and deals with the legal phase in a manner that is readily appreciated by the psychiatrist. Mention is made of the fact that the confusion existing in psychiatry and its legal phases is more apparent than real. The effort to show that the two phases—medical and social—are complementary is highly successful.

PART ONE is devoted to mental disorders. It is an outline of psychiatry written in simple language with an appended glossary for words unfamiliar to the lawyer and the layman. It is comprehensive in its scope and the nomenclature conforms to that outlined by the American Psychiatric Association. This part deals with the types of reactions and the forms of insanity. The former is a description of the types of reactions found in the different forms of insanity and deals broadly with organic and behavior reactions. Under organic reactions the psychopathology found in—First: diffuse brain damage, confusional states, acute and acquired constitutional defects, epileptiform convulsions, dementias, etc. Second: focal brain damage, describing the neuropathology arising from focal lesions. Behavior reac-

tions have to do with the psychopathology in manic depressive schizophrenic and paranoid reactions.

The forms of insanity are classified as mentioned above and describe clearly, briefly and in as simple language as possible the different forms of insanity.

PART TWO discusses the legal aspects of insanity. It contains a wealth of information relative to legal determination of insanity, guardianship, contracts, marriage, torts and responsibility in insane persons. Several valuable suggestions are given for the physician acting as a witness and case references given for the legal points involved. The appendix includes "Suggested Forms for Incorporation in State Commitment Laws." This will be found valuable for those interested in improving their state laws relative to commitments.

Never before has information of this character been compiled in a single volume. Its clearness and simplicity, with the legal experience of its authors, make it a valuable addition to any one's library that is interested in forensic psychiatry.—M. Q. H.

Pediatrics. Vol. IV. By various authors. Edited by Dr. Isaac A. Abt., M.D. W. B. Saunders Company, Philadelphia and London.

This volume covers the following subjects: Pleura—Lungs—Thorax—Circulation—Heart—Blood Vessels—The Blood—Endocrine Organs—Spleen—Lymph Nodes—Kidney—Bladder—Urine—Male and Female Genitalia.

The various conditions are discussed very thoroughly but it is somewhat displeasing, in a work of this magnitude, to find a footnote stating that the question of the action of pneumothorax can be found brought up to date elsewhere.

The chapters on Circulation—Heart and Blood are excellent as is Dr. Helmholtz' chapter on The Pyogenic Infections of The Urinary Passage.—H. K. T.

Volume V, containing 865 pages with 373 illustrations. Philadelphia and London, W. B. Saunders Company, 1924. Cloth, \$10.00 per volume. Sold by subscription.

This volume is devoted to: Diseases of Face and Jaws, Orthopedic Surgery, Tuberculosis, Hereditary Syphilis, Infectious Diseases, Infection and Immunity.

The subjects are covered for the most part very completely, especially the section on Orthopedic Surgery and Hereditary Syphilis. The description of some chest signs in the chapter on Tuberculosis is somewhat vague and confusing.

The work as a whole is of the usual high standard but this volume is marred by too frequent typographical errors.—H. K. T.

Text-Book of Pathology. By William G. MacCallum, M.D., Professor of Pathology and Bacteriology, Johns Hopkins University. Third edition, thoroughly revised. Octavo volume of 1,162 pages with 575 original illustrations. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$10.00 net.

It is useless to review at length a book which in its first two editions has been so widely and favorably received by students of Pathology. The additions, made necessary by medical discoveries since the last edition, have but added to the usefulness of this. In treating the pathological disturbances as reactions to injury, the

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Number 3

The Importance of the Early Diagnosis of Esophageal Lesions*

BY JUSTIN M. WAUGH, M.D.

Department of Otolaryngology, Cleveland Clinic, Cleveland

The identity of the symptoms of intra-esophageal lesions, their immediate effect upon the general resistance of the patient because of the inevitable limitation of the intake of food, the rapid course of malignant growths within this structure, and their extension to adjacent tissues, to the larynx in particular, make the early diagnosis of esophageal lesions of peculiar importance. Early diagnosis in cases of non-malignant lesions makes possible the prompt institution of proper treatment to relieve the symptoms and avoid a malignant sequel, and in cases of malignancy assures the earliest possible chance of amelioration and possible even though improbable cure.

The fact that lesions of the esophagus uniformly present only two outstanding symptoms, dysphagia and regurgitation, as compared with the complex symptomatology of lesions of other viscera would seem to make the differential diagnosis very simple. Actually, however, it makes it more difficult.

The lesions of the esophagus of the most frequent occurrence are carcinoma, so-called cardiospasm and diverticulum. Each of these conditions is heralded by dysphagia, a greater or less degree of regurgitation of food, nearly always also by the coughing up of more or less mucus. It is obvious, therefore, that the differentiation among these three conditions demands the application of special diagnostic procedures.

SIGNIFICANT SYMPTOMS

The onset of dysphagia in a hitherto healthy person is a significant symptom and its importance is not to be overlooked. It may at first be transitory and variable in character, appearing and disappearing suddenly; when well established it may be more or less permanent. At first it may be associated only with the swallowing of solid food; this is followed by difficulty in swallowing semi-solids; later only liquids can be taken and finally complete inability to swallow ensues. The

dysphagia may be the result of an organic lesion or it may be due to spasm, especially if at the upper end of the esophagus, and it may be accompanied by attacks of coughing due to the entrance of food particles into the respiratory passage. This produces a state of nervousness, apprehension and a disinclination to take food.

These same symptoms, however, may be induced by other affections such as postdiphtheritic and bulbar paralysis, retropharyngeal abscess, tuberculous and malignant disease of the larynx, cicatricial and malignant obstruction of the hypopharynx, and even by pressure from external tumors such as enlarged cervical masses and infiltration of the thyroid.

Painful sensations such as burning in the region of the larynx, and a feeling of tension and constriction in the neck, may be present, but of far greater importance is the more or less continuous pain, increased by swallowing, referred to the region of the cricoid, and sometimes associated with pain in the ear. This otalgia is apparently due to the intimate relations of the tympanic plexus and glossopharyngeal nerves.

Salivation may be a prominent symptom of esophageal lesions and is one of the most distressing phenomena induced by the spasm or obstruction.

Hiccough may be a suggestive symptom and the period of time after swallowing at which regurgitation of food takes place may aid in the diagnosis. This occurs earlier in cases of carcinoma than in cases of so-called cardiospasm. The delay in cases of cardiospasm is due to the increased capacity of the esophagus above the cardia due to dilatation. Hoarseness, due to paralysis of the vocal cord resulting from pressure on the recurrent laryngeal nerve, is not uncommon and in looking for the cause of the paralysis, the possibility of an esophageal lesion should not be overlooked.

The symptoms noted above are not limited to lesions in the upper part of the esophagus: they may occur in any degree of intensity and any or all of them may be absent. It is, therefore, im-

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possible to present a clinical picture that is pathognomonic of any single condition. Thus, sudden choking attacks at the beginning of a meal may be the first warning of disease in the phrenocardiac segment and all the symptoms manifested at the upper end of the esophagus may be due to a pathological condition in the lower part.

DIAGNOSTIC MEASURES

The diagnostic measure which most readily suggests itself is the X-ray and fluoroscopic examination which, by many writers, is considered a practically certain means of diagnosis. I am ready to concede that this is true in the case of a diverticulum, a clean-cut outline of which, in the majority of cases, at least, is presented by the filling with barium mixture. As for cardiospasm and carcinoma, however, the X-ray appearance is not pathognomonic in either case, especially if the lesion is at the lower end of the esophagus. A roughened and uneven outline suggests a carcinoma; a stricture with a dilated esophagus above, the outline of which is smooth, suggests a cardiospasm; in the former instance the diagnosis of carcinoma is justified; in the latter case the diagnosis of cardiospasm is often a serious error. This is well illustrated by one of our cases, in which there seemed to be no question but that the fluoroscopic picture was that of a cardiospasm, whereas at the time the case was esophagoscoped a diagnosis of malignancy was made and at autopsy, an extensive carcinomatous invasion of the cardiac end of the stomach and esophagus was found. This was one of those rare cases of so-called submucous carcinoma in which there is no break or ulceration in the mucous membrane. In several of our other cases, also, the X-ray picture is far more suggestive of cardiospasm than of carcinoma, while the esophagoscopic observation and the clinical course have verified the diagnosis of carcinoma. The danger of depending upon the X-ray appearance of esophageal lesions for diagnosis is well expressed by Blaine¹ who "reiterates the need for conservatism in X-ray work and cautions the X-ray enthusiast to keep both feet on firm ground by seeing each individual case not as an 'X-ray diagnosis' but as a 'diagnosis aided by X-ray study and observation'." In nearly every case of suspected esophageal lesion, therefore, I would urge the importance of direct examination by means of the esophagoscope. In a case of spasm or stric-

ture at the lower end of the esophagus, hospitalization may be required for a few days, and some cleansing of the esophagus if it is dilated above, in order to avoid the difficulties encountered in making a diagnosis when the walls of the esophagus contain remnants of food and too much mucus. No examination should be made immediately after a barium test. Esophagoscopy is important also in the case of a diverticulum however clean-cut the X-ray picture may be, for the reason that a diverticulum may be the precursor of a carcinoma and it is vitally important that the condition of the esophageal lumen be closely investigated before the plan of management is decided upon.

CARDIOSPASM OFTEN MALIGNANT

It is my own belief that cases of so-called cardiospasm are much more often malignant than is generally supposed. Since the appropriate treatment for a non-complicated cardiospasm is dilatation, every diagnostic effort culminating in the use of the esophagoscope should be utilized to determine whether the stricture is benign or malignant. I am not satisfied at present that the so-called cardiospasm is a definite pathological entity. It seems reasonable to suppose that in many of these cases the esophageal spasms are reflexes from other lesions; certainly they are often associated with other esophageal and gastric lesions. Therefore, even if a painstaking examination does not demonstrate any other esophageal lesion, treatment of the cardiospasm by hydrostatic dilatation should be followed by further fluoroscopic and X-ray studies, in order that such lesions as gastric ulcer or carcinoma may not be overlooked. In cases in which there is marked spasm at the cardia, the barium does not fill the stomach satisfactorily and an associated pathological condition may be missed.

Howarth,² of St. Thomas' Hospital in London, says that the etiology of spasmodic conditions at the lower end of the esophagus has been the subject of much debate and the nomenclature attempting to define the conditions such as cardiospasm, hiatal esophagisms, etc., "do not connote definite diseases but are merely manifestations of a local or general disease which have led to a dysfunction of the vegetative nervous system whereby the normal reflex sequence is interrupted and the interdependent musculature of the hiatal esophagus and the cardia is thrown out of gear."

In all cases of spasmodic stricture of the esophagus, therefore, a study should be made of the surrounding structures as well as of the esophagus itself. Thus, in one of our cases, a stricture in the middle portion was due to pressure from an intrathoracic goiter; in one esophagospasm was associated with pressure from dilatation of the aorta; in another with a diverticulum.

In many cases it is impossible to differentiate between carcinoma and luetic lesions by the X-ray appearance or by direct observation through the esophagoscope. In every case a Wassermann test should be made. If the Wassermann test is negative, the assumption that the condition is probably a carcinoma is justified; if the Wassermann test is positive and the condition due to lues, a course of antiluetic treatment will usually cause the area of invasion to diminish. Thus, in one of our cases which presented every appearance of carcinoma and was so diagnosed, a period of antiluetic treatment subsequent to a positive Wassermann produced a rapid diminution of the esophageal invasion. In another in which the X-ray appearance and the direct esophagosopic examination indicated the diagnosis of lues which was apparently confirmed by a positive Wassermann, the fact that the lesion is apparently yielding to radium therapy indicates that the obstruction is probably due to a carcinoma.

IMPORTANT FACTS

Any esophageal ulceration should be carefully studied and the following facts kept in mind:

1. Most ulcers are found above a stricture caused by a foreign body or by some erosive agent.

2. Tertiary syphilitic lesions in the esophagus are of exceedingly rare occurrence, although they are not infrequently found in other thoracic organs. Luetic ulceration is associated with the presence of more scar tissue; it is elevated at the edge and though red is not as angry looking and does not bleed as readily as carcinoma.

3. Tuberculous ulceration is not characterized by inflammatory appearances, the edges are not raised and the surface does not bleed easily when sponged. A superficial ulceration or erosion, with whitish or yellowish granules, or the presence of such granules without ulceration, presents a fairly distinct picture.

Certain authors recommend the removal of a

specimen of an esophageal growth for examination. In my opinion, the wisdom of this procedure is open to serious question because of the increased danger from both internal and external invasion, except in cases of sessile or papillary growths which can be nipped off without disturbing the deeper structures. However, such a specimen is not always satisfactory to the pathologist.

In a valuable discussion of diseases of the esophagus before the Section of Laryngology of the British Medical Association in 1922,² attention is drawn to the fact that in men the incidence of malignant diseases increases as one descends the esophagus, the opposite condition being true in women. Therefore, in women dysphagia high up in the esophagus should be considered as possibly a sign of an early carcinoma. These discussants emphasize also the not infrequent association of carcinoma of the esophagus with septic teeth, a point which suggests the importance of a complete X-ray examination of the teeth in all cases of esophageal disturbance.

One should bear in mind that certain conditions contra-indicate the use of the esophagoscope. As listed by Freeman,³ these are: "aortic aneurysm, cardiac diseases with hypertrophy, arteriosclerosis with hypertension, advanced pulmonary tuberculosis, cirrhosis of the liver, and curvature of the spine (of the cervical or dorsal region), except when done for the removal of a foreign body." Jackson,⁴ on the other hand, states that practically the only contra-indication of the use of the esophagoscope is lack of skill on the part of the esophagoscopist. "The trained and skillful may examine any case of general or local disease with relatively little risk, while in the hands of the rough, the careless or the untrained, the esophagoscope is a dangerous and frequently fatal instrument."

Acute esophagitis and water hunger are the only contra-indications cited by Jackson, the latter condition emphatically forbidding the procedure until the condition has been relieved by hypodermoclysis, enteroclysis, and in the most urgent cases by gastrostomy. These two conditions, especially the latter, are extremely important. It is remarkable how dry, glistening and non-elastic the esophagus becomes in a condition of general water starvation. Every operator who disregards this most important condition will have cause to regret it.

ANATOMICAL ABNORMALITIES

The examiner should be aware of the fact that anatomical abnormalities at the entrance to the esophagus may be encountered, such as contractions due to scar tissue, webbing, lack of development of or change in one or the other of the pyriform sinuses, etc., and great care should be used in inserting the esophagoscope lest, in the effort to reach the lower levels of the esophagus, serious damage be inflicted at the upper end.

A word of warning should be offered lest the procedure of esophagoscopy itself be made an added menace to the patient.

1. The patient should be hospitalized; an accurate and adequate esophagoscopy is not an office procedure.

2. An attempt to esophagoscope a patient should never be made on the same day as that on which barium is given.

3. A water-starved patient should never be esophagoscoped.

4. The insertion in the esophagus should be made with the utmost regard for the natural course of the esophagus and the esophagoscope should never be pushed forcibly downward but should be guided gently past the normal narrow or constricted portions of the esophagus; namely, the cricopharyngeal, the aortic, the bronchial, and the cardiac constrictions. If it is decided that the cause of the stricture or spasm is benign, bougies or the hydrostatic dilator may be guided with extreme care and gentleness to the site to be dilated, care being exercised throughout the procedure to avoid abrasion or tearing of the mucous membrane.

PERSISTENT CHRONIC COUGH

I should like, at this point, again to emphasize the statement, that the esophagus should be examined in all cases of persistent chronic cough with excessive mucus expectoration, for a congestion of the larynx shown by laryngoscopic examination may be due to some esophageal lesion. Patients are often treated for a long time for a supposedly laryngeal trouble which is actually due not to laryngeal disease but to irritation of the larynx caused by the regurgitation of material from a diverticulum. This point is illustrated by a case seen at the clinic in October, 1923. This man had had difficulty in swallowing, some shortness of breath and a great deal of coughing for

three or four years. He emphasized the embarrassment from his cough and the raising of mucus more than any other feature of his trouble. For the past three years he had seldom been able to lie down on account of the paroxysms of coughing and the increased discharge of mucus, and because of the sudden accidents at the table, due to his coughing and unexpected regurgitation of particles of food, he had been unable to eat in a restaurant or at the homes of any of his friends for more than two years. He had lost much weight during this time. He had consulted many specialists and had been advised that he might be developing a cancer of the larynx.

Examination of the throat showed some congestion of the larynx and roughening of both cords, but no thickening or ulceration. There was mucus in both pyriform sinuses. He was sent at once to the X-ray department for a barium test of the esophagus which revealed a diverticulum of the esophagus about opposite the sterno-clavicular joint. Esophagoscopy showed the opening into the diverticulum to be smooth with no suggestion of malignancy. The diverticulum was removed by Dr. Crile with resultant total relief of all the symptoms. In this case the diverticulum had probably been present for at least three years, but because of the pronounced irritation to the mucous membrane of the larynx by the esophageal secretions and the regurgitation of particles of food, the larynx had been regarded as the seat of the trouble and no attempt to demonstrate a lesion in the esophagus had been made.

It is not improbable that in many cases of carcinoma of an apparent duration of only two or three months, or even less, symptoms which might have suggested a beginning esophageal lesion may have been present for some time, or have been overlooked because of the greater prominence of the symptoms of some other lesion.

CLINIC SUMMARY

Since the opening of the Cleveland Clinic in March, 1921, we have had 72 esophageal cases, including 19 cases of esophagospasm, 3 of obstruction, 6 of stricture, 3 of ulcer, 12 of diverticulum, 29 of carcinoma.

Of the cases of carcinoma, 19 were males and 10 females, this relative incidence in females being somewhat higher than in most of the reported series. Among the cases of undoubted car-

cinoma, the highest incidence, 16 cases, was between the ages of 50 and 60 years; the duration of symptoms had been less than 10 months in all but 5 of the cases; less than 6 months in 18 cases; less than 3 months in 11; less than one month in 6. In some cases the emaciation due to the lack of solid food was marked; and in practically every case, dysphagia was the prominent symptom. Cough, expectoration, regurgitation and the raising of mucus were present in most of the cases.

A study of the clinical histories of these cases of carcinoma indicates clearly that the prognosis would have been materially improved by an earlier consultation; for although carcinoma of the esophagus is one of the most hopeless among malignant conditions, nevertheless there is an element of hope in the application of radium and deep X-ray therapy, provided these measures may be applied early in the progress of the growth. Thus, in one of our cases, the patient who, on admission, could swallow only liquids, can now after two applications of radium (total, 753 mg. hours), two months after the first application, swallow semi-solids and her general condition is markedly improved. A note of hope is sounded also by Fischer, who disclaims the conclusion that carcinoma of the esophagus has a 100 per cent mortality, reminding us of Torek's patient, who was well at the end of nine years after a transpleural operation.

One possible relation of spasmodic stricture to carcinoma may be indicated by the fact that in our series the average age of the patients with carcinoma of the esophagus was 56 years, no patient was under 40 years of age and only 5 were under 50; while among the cases of cardio- and esophagospasm the average age was 45, and 41 per cent of these patients were under 40 years of age. On the other hand the average duration of symptoms in our cases of esophagospasm was 29 months; in the cases of carcinoma only 6 months; but it should be added that the clinical histories in the latter group often included a statement that the symptoms directly referable to the esophagus had, in many instances, been preceded by varying periods of more general symptoms such as indigestion, general loss of strength, etc. In certain of the cases of cardiospasm in which the esophageal symptoms had been of long duration

there is a history of a swift increase in the degree of dysphagia with a rapid loss in weight during the months immediately preceding the first consultation.

CONCLUSION

In conclusion, the prevention of carcinoma of the esophagus and the cure of the benign esophageal lesions demands the earliest possible diagnosis which, in turn, demands (1) on the part of the public, willingness to present themselves promptly to the physician in case of continuous or repeated attacks of coughing, of dysphagia in any degree, of a rebellious and chronic indigestion with the feeling of a "lump in the throat," of the regurgitation of food, of the expectoration of large amounts of mucus, especially when particles of food are mixed with it; (2) on the part of the general practitioner, consultation with a specialist skilled in the use of the esophagoscope and with the roentgenologist; (3) on the part of the specialist, consultation with the roentgenologist, the internist, the dentist and the surgeon to make sure that luetic lesions, mediastinal tumors, carcinoma of the stomach, laryngeal disease, substernal thyroid and septic teeth are excluded.

Finally, an adequate and painstaking history is of great importance in arriving at a diagnosis. The character of the onset of the symptoms and their duration are significant. The psychic state and any symptoms of central nervous disorder that may upset the neuro-muscular mechanism of the esophagus, either through the sympathetic or the pneumogastric nerves, should be studied. The age of the patient is important; in patients over 50 years of age carcinomatous changes are probable. However, Zaaijer,⁶ of Leiden, reports two cases of definite cardiospasm relieved by treatment, one 61 and the other 66 years of age. Plummer and Vinson⁵ also report cases of cardiospasm in patients of from 60 to 80 years of age.

To the propaganda for the prevention of cancer in which early consultation with a physician for symptoms referable to the breast, the stomach, the rectum and the uterus, in particular, is urged, there might well be added an urgent word as to the importance of an immediate consultation in cases of continued or repeated attacks of spasmodic coughing, regurgitation of food, a "lump in the throat," or any difficulty in the passage of food through the esophagus.

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The Effect of Tryparsamide on the Optic Tract; a Clinical Study*

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Madison

The use of tryparsamide in the treatment of neuro-syphilis has aroused a great deal of interest since the appearance of the article by Lorenz, Loevenhart, Bleckwenn, and Hodges in 1923.¹ Tryparsamide was first prepared by Jacobs and Heidelberger² of the Rockefeller Institute. Its biological action in animals was investigated by Brown and Pearse.³ Their studies included investigation of its toxicological action in animals, the pathological lesions produced, and the effect of the drug in experimental syphilis and trypanosomiasis. In addition, Dr. Pearse and also Moore and Keidel studied the action of the drug in the treatment of human syphilis.

The Madison workers decided to reopen the investigation of the treatment of syphilis of the central nervous system, and they asked for and received the drug from the Rockefeller Institute for this study. These investigators confirmed the animal findings of the Rockefeller group, and were the first to suggest the use of tryparsamide in neuro-syphilis. Very early in the work at Madison the effect of the drug on the optic tract became of great interest, and at the invitation of this group the writer joined in the clinical and experimental investigations which they were carrying out, concentrating his efforts on the optic tract.

In the first publication of the Madison group it was recommended that the drug should not be given to patients showing eye changes of luetic origin, because at that time there was not enough information regarding the effect of the drug on the optic tract. This work was begun in order

to determine the nature of the ophthalmological changes incident to eye complications noted under tryparsamide therapy and also to determine the effect of tryparsamide on luetic eye lesions.

A large number of patients were carefully observed ophthalmologically. In order to secure accurate comparative data, we in each case examined the patient before, during and after treatment, the following examinations being made: 1, acuity of vision, both with and without correction; 2, near point of accommodation of each eye, separately; 3, anomalies of extra-ocular muscles; 4, corneae; 5, irides; 6, pupillary reactions; 7, fundi; 8, form and color fields; 9, physiological blind spots; 10, scotomata. The perimetric work was checked by the use of different instruments, care being exercised always to secure the same degree of illumination as nearly as possible. Lloyd's stereo-campimeter was used in the determination of blind spots and scotomata.

Since our work was begun in 1921, the publication of Wood and Moore⁴ has appeared and deals largely with the first phase of our problem; namely, the ophthalmological changes associated with amblyopia incident to tryparsamide therapy in patients showing no previous eye pathology. In this report we confine ourselves to the second phase of the problem. We have selected fifteen cases of the total number examined by us for inclusion in this report, because they showed luetic eye changes previous to treatment. This paper constitutes a report of the effect of tryparsamide in those possessing definite eye pathology.

CASE SERIES

Almost all of the fifteen cases here reviewed had previously had some form of anti-luetic treat-

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Patient Name and Age	Date	Corrected Visual Acuity		Fundi		Visual Fields				Blind Spots		Scotomata	
		O.D.	O.S.	O.D.	O.S.	Form		Color		O.D.	O.S.	O.D.	O.S.
						O.D.	O.S.	O.D.	O.S.				
D.C.B. 37	10-15-23	20/20+	20/20+	Normal	Early primary atrophy	30° temporal 10° nasal	40° temporal 20° nasal	Normal	Contracted	1 1/3 normal	1 1/3 normal	0	0
	11-17-23	20/20+	20/20+	"	" "	15° temporal 0° nasal	20° temporal 5° nasal	"	"	"	"	"	"
	6-7-24	20/15	20/15	"	" "	10° temporal 0° nasal	20° temporal 0° nasal	"	Normal	"	"	"	"
R.D.Y. 43	12-20-23	20/15-2	20/15-1	Normal	Normal	20° temporal 10° nasal	30° temporal 10° nasal	Normal	Normal	Twice normal	1 1/3 normal	0	0
	2-7-24	20/15	20/15	"	"	15° temporal 10° nasal	10° temporal 5° nasal	Overlaps	"	"	"	"	"
	6-2-24	20/15	20/15	"	"	Normal	Normal	Normal	"	"	"	"	"
O.S. 40	4-10-23	20/15	20/20	Definite blurring of nasal margin of optic disc	Definite blurring of nasal margin of optic disc	10° concentric contraction	15° concentric contraction	Normal	Normal	1 1/3 normal	Twice normal	0	0
	12-5-23	20/15	20/15-2	No blurring No atrophy Normal	No blurring No atrophy Normal	5° concentric contraction	10° concentric contraction	"	"	"	"	"	"
J.P.G. 46	11-16-23	20/15	20/15	Definite primary atrophy	Definite primary atrophy	30° temporal 20° nasal 10° above 20° below	30° temporal 20° nasal 15° above 20° below	Normal	Overlaps	Twice normal	Twice normal	0	0
	2-4-24	20/15	20/15	" "	" "	" "	" "	"	"	"	"	"	"
	3-11-24	20/15	20/15	Atrophy apparently progressive	Atrophy more marked than right eye	40° temporal 25° nasal 20° above 20° below	20° temporal 20° nasal 20° above 30° below	Overlaps	"	"	"	"	"
F.A.C. 45	6-18-23	20/20	20/20	Early primary atrophy	Early primary atrophy	40° temporal 20° nasal	40° temporal 30° nasal	Conforms	Conforms	Twice normal	1 1/2 normal	0	0
	4-7-24	20/20	20/20	" "	" "	40° temporal 30° nasal	45° temporal 30° nasal	Overlaps	Overlaps	"	"	"	"

ment. Tryparsamide was administered by Dr. Bleckwenn according to the general plan outlined by the group. It goes without saying that the treatment varied with the individual needs of the patients.

Of this series of fifteen cases, four complained of subjective eye symptoms. The type of symptom is fairly characteristic, and has been well described by Wood and Moore⁵. Those patients showing eye symptoms usually developed them after the second to fifth treatment. If eye symptoms have not developed by the fifth treatment they are unlikely to appear, and such have never been noted, so far as we know, after the tenth treatment. The patient complained of a dazzling sensation before his eyes and usually described this as the appearance of "heat waves" in his distant vision. There was no ocular pain, but the patient tired easily after close work. These symptoms generally continued from a few days to two weeks. Immediately upon the development of eye symptoms the treatment was discontinued and was only resumed when these had disappeared, or

when ophthalmological examinations justified continuation. Upon resumption of treatment there was never a recurrence of visual disturbance.

Upon ophthalmological examination the eyes of these patients showed no changes. Externally their eyes were normal, and the visual acuity was not impaired. Muscular balance and accommodation was unaffected, and the media and fundi presented the same picture as before treatment. In these cases we were unable to detect even a low grade retinal hyperaemia. Visual fields and blind spots remained unaltered. Central scotomata, either relative or absolute, were not observed. We considered this condition to be one of retinal hyperaesthesia and we regarded it as an indication for the prolongation of the period between treatments which we ordinarily placed at one week. The objective ophthalmological changes shown by this series of patients is best demonstrated by the illustrated tables.

Even in the absence of ophthalmoscopic changes we considered the presence of definite field

Patient Name and Age	Date	Corrected Visual Acuity		Fundi		Visual Fields				Blind Spots		Scotomata	
		O.D.	O.S.	O.D.	O.S.	Form		Color		O.D.	O.S.	O.D.	O.S.
						O.D.	O.S.	O.D.	O.S.				
H.J.P. 65	7-27-23	20/30-1	20/40-1	Advanced primary atrophy and marked angio-sclerotic changes	Advanced primary atrophy and marked angio-sclerotic changes	Concentric contraction to 10°	Concentric contraction to 10°	Central color perception only	Central color perception only	Not obtainable	Not obtainable	0	0
	11-8-23	20/30-1	20/40-1	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "
	11-14-23	20/30-2	20/40-1	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "
R.S.G. 49	11-8-23	20/20-2	20/15	Early primary atrophy	Early primary atrophy	40° concentric contraction	45° concentric contraction	Conforms	Conforms	Twice normal	Twice normal	0	0
	2-12-24	20/20	20/15	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "
E.S.S. 40	9-11-23	20/15	20/15	Normal	Normal	15° concentric contraction	20° temporal 5° nasal	Conforms	Conforms	1/3 normal	Twice normal	0	0
	4-18-24	20/15	20/15	" "	" "	" "	10° temporal 0° nasal	" "	" "	" "	" "	" "	" "
C.W.B. 52	6-28-23	20/15	20/15	Early primary atrophy	Early primary atrophy	30° concentric contraction	20° concentric contraction	Conforms	Conforms	Twice normal	1/3 normal	0	0
	10-8-23	20/15	20/15	" "	" "	20° " "	5° " "	" "	" "	" "	" "	" "	" "
	3-6-24	20/15	20/15	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "
H.E. 48	1-25-24	20/15	20/15	Early primary atrophy	Early primary atrophy	50° temporal 20° nasal	40° temporal 15° nasal	Overlaps	Overlaps	1/3 normal	Twice normal	0	0
	2-15-24	20/15	20/15	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "

contractions with or without blind spot enlargements to mean early retinal involvement.

A study of the chart shows that in three patients there was a definite improvement of visual acuity. We are loath to believe that this improvement is to be attributed to specific improvement of the retinal function and rather attribute it to the general improvement in the mental status of the patient and bettered cooperation on his part. It must be noted, however, that of the three showing improved vision none evidenced any marked psychic changes. They were all cooperative even before treatment.

In four cases there was definite improvement of the visual fields, most marked for form. This, too, we attribute to the general improvement of the patient.

In one case there was definite improvement in the fundus picture. This patient, O. S., when first observed, showed a definite blurring of the nasal margins of his optic discs without evidence of atrophy. There was no elevation of his optic papilla, and otherwise his fundi were normal.

Corresponding to the involvement of the optic disc, ophthalmoscopically observed, there was an enlargement of the blind spots. Having received three full courses of tryparsamide (twenty-four doses), the optic disc involvement completely disappeared, but the blind spots remained enlarged to the same degree as when first observed. His visual acuity showed slight improvement. In one eye there was no decrease in the visual fields. This patient has been observed for a period of one year without showing further eye changes.

DECREASE IN VISUAL FIELD

While under observation, four patients showed some decrease in visual fields, both for form and color.

The first of these patients, F. S., a tabo-paretic, was thirty-seven years of age. He was very cooperative, and it is interesting to note that with the ophthalmoscope there was no evidence of optic nerve atrophy. His form fields, however, in the initial examination showed definite contraction of approximately twenty degrees, and the blind spots were one and one-third times normal. We

Patient Name and Age	Date	Corrected Visual Acuity	Fundus		Visual Fields				Blind Spots		Scotomata		
			O.D.	O.S.	Form		Color		O.D.	O.S.	O.D.	O.S.	
					O.D.	O.S.	O.D.	O.S.					
O.W. 53	7-6-23	20/40	HM	Advanced primary atrophy	Advanced primary atrophy	Concentric contraction to 15°	Not obtainable	Central color perception	Not obtainable	Not obtainable	0	0	
	10-5-23	20/40	HM	" "	" "	" "	" "	" "	" "	" "	" "	" "	
	12-4-23	20+3/40	HM	" "	" "	Concentric contraction to 30°	" "	" "	" "	" "	" "	" "	
	6-12-24	20/200	Light perception	" "	" "	Not obtainable	" "	" "	" "	" "	" "	" "	
F.S. 37	10-17-23	20/15	20/15	Normal	Normal	20° temporal 15° nasal 15° above 10° below	20° temporal 15° nasal 10° above 20° below	Conforms	Overlaps	1/3 normal	1/3 normal	0	0
	4-5-24	20/15	20/15	" "	" "	30° temporal 15° nasal 20° above 30° below	40° temporal 15° nasal 10° above 30° below	Overlaps	" "	" "	" "	" "	" "
J.A.H. 44	12-7-23	20/15	20/15	Definite primary atrophy	More marked primary atrophy	Normal	15° temporal 0° nasal	Conforms	Conforms	Normal	Normal	0	0
	3-18-24	20/15	20/15	" "	" "	30° temporal 20° nasal	40° temporal 10° nasal	Overlaps	Overlaps	" "	" "	" "	" "
C.A. 45	10-22-23	20/15	20/15	Early but definite primary atrophy	Early but definite primary atrophy	20° temporal 20° nasal	35° temporal 25° nasal	Conforms	Overlaps	Normal	1/3 normal	0	0
	12-19-23	20/15	20/16	" "	" "	20° temporal 20° nasal	25° temporal 20° nasal	" "	Conforms	1/2 normal	1/2 normal	" "	" "
	2-11-24	20/16	20/15	" "	" "	20° temporal 10° nasal	25° temporal 15° nasal	" "	" "	Twice normal	Twice normal	" "	" "
	4-28-24	20/15	20/15	" "	" "	30° temporal 15° nasal	30° temporal 15° nasal	" "	" "	3/1 normal	3/1 normal	" "	" "
L.B.W. 47	12-29-23	20/15	20/15	Definite primary atrophy	Definite primary atrophy	55° temporal 35° nasal	55° temporal 35° nasal	Conforms	Conforms	Twice normal	Twice normal	0	0
	6-14-24	20/15	20/15	Atrophy progressive	Atrophy progressive	60° concentric contraction	65° concentric contraction	" "	" "	2 1/2 normal	2 1/2 normal	" "	" "

did not see this patient until six months after the initial examination, during which period he had received sixteen doses of tryparsamide. At this time his fields showed a contraction of approximately thirty degrees, but there was no changes in the previous measurements of the blind spots. It is, of course, common knowledge that degenerative retinal changes occur in this condition with or without treatment of any sort, and in trying to fix a cause for the decrease of the fields in this case, one may attribute it to the drug or to the progress of the disease as one sees fit. We expect the patient, however, to show some atrophy later, since functional loss always precedes morphological change.

The second patient of this group, J. P. G., was forty-six years of age. The field contractions were similar to the case, F. S., previously noted, except for the presence of a definite atrophy upon ophthalmoscopic examination before treatment was begun. Six months later, following a full course of tryparsamide, there was a resultant loss in fields of not more than ten degrees.

The third case, J. A. H., showed a loss of twenty-five degrees in form field in either eye during a period of four months and while under treatment with tryparsamide. This patient was a paretic who cooperated poorly. It is interesting to note that on the first examination the ophthalmoscopic picture revealed a definite primary atrophy. We felt that our first perimetric work was inaccurate, due to relatively poor cooperation on the part of the patient.

The last of the four patients showing field contractions was O. W., a tabetic, fifty-three years of age. He was very accurate in his cooperation, and upon his first examination before treatment his right eye showed the form field contracted to fifteen degrees. The field for his left eye could not be obtained because of contraction and loss of visual acuity. This patient received a course of eight doses of tryparsamide during a period of three months. Two months following the last treatment there was an apparent improvement in the form field of the right eye. Upon returning for observation nine months after treatment was

begun and six months after the last injection of tryparsamide, it developed that atrophic changes had advanced until it was no longer possible for one to obtain an accurate form field for either eye. The effect of the drug on the vision of this patient is problematical. Here again we do not know what to accredit to the drug and what to allocate to the progress of the disease. It was very definite before tryparsamide was given that atrophic changes were far advanced in both eyes, and there was every reason to believe that the degenerative process would progress. The only definite conclusion to be drawn is that tryparsamide, in this case, did not stop the degenerative change. The very marked improvement, however, in the patient's general health, as indicated by alleviation of his gastric crises and lightning pains were gratifying, and, taken on the whole, we believe that the drug benefitted the patient and we approved the end-result.

BLIND SPOT CHANGES

Changes in the blind spot measurements incident to treatment were apparent in two patients of the series. In each there was a definite enlargement, however, before treatment was begun.

In one case, L. B. W., the enlargement in the blind spot was co-incident with a slight contraction of the form field.

In the second, C. A., the enlargement was very marked and was not co-incident with field contraction.

We frequently find blind spot enlargement to be associated with progressive optic atrophy. Six months had elapsed between these examinations, and here again the treatment did not completely arrest the degenerative changes.

Those who have studied arsenical amblyopia have not recorded enlargement of the physiological blind spots as a manifestation of drug effect.

In this series only one patient, O. W., suffered a loss of visual acuity. This was the patient whose form field for the right eye was contracted to fifteen degrees and for the left eye was so small as to be unobtainable. His field contractions have been discussed above. The loss in visual acuity was noted four months following the last treatment and further attested to the advance of his optic atrophy.

CONCLUSIONS

One must be very cautious in drawing conclu-

sions from a limited series of cases. The patients included in this report, however, have been observed over a long period of time and tentative conclusions must be drawn, even though subsequent work may somewhat modify them. In the use of tryparsamide in neuro-syphilis, we should like to emphasize the following points:

First, the importance of a thorough ophthalmological examination before beginning tryparsamide treatment, during the treatment, and subsequent thereto, in order to obtain the end-result.

Second, the existence of luetic changes of the optic tract do not, in our opinion, constitute an absolute contra-indication to tryparsamide. In determining whether the drug shall be used in a particular case presenting eye pathology, one must take into consideration the probable course of the eye lesion if untreated. Against this one must weigh the other evidences of the disease and the probability of clinical improvement, apart from the vision, if treated. The eye hazard in these cases is great, whether treated or untreated. The drug is being used in the treatment of a most serious medical situation and some hazard must be assumed just as is taken in other medical and surgical procedures of a less serious character. As noted above, one sees a fair percentage of cases showing improvement in visual and in ophthalmological findings in the course of tryparsamide therapy, and in some cases we have gained the impression that the therapeutic response in the optic tract has been better than that noted under arsphenamine or neo-arsphenamine.

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DISCUSSION

DR. F. A. DAVIS (Madison): I want to say a word regarding Dr. Neff's paper. I feel that any one who ventures forth in the unpromising field that especially pertains to visual matters should be encouraged and congratulated.

The inevitable end of parietic optic atrophy is known

to every one. Many of the newer forms of therapy have been watched particularly for their effect upon the visual acuity and field of vision. These studies should be of assistance to those adopting this form of therapy. Dr. Neff has been extremely careful in the various tests and records connected with this series of cases, some of which I have observed. The results are encouraging. It is to be hoped that this work can be continued and later more definite conclusions can be drawn for observation.

DR. S. C. HIGGINS (Milwaukee): I have had occasion to discuss this work with Dr. Neff. There is much more work and detailed investigation in his researches than one unfamiliar with such undertakings imagines. The taking of a great number of visual fields is very trying. His tabulation and analyses have been skillfully handled.

DR. C. G. DWIGHT (Madison): I want to thank Dr.

Neff for the splendid way of handling this paper, to which I know he has given careful and exhaustive work. It is work that has to be gone over and over. I am not in position to discuss it because of the enormous amount of work but I want to thank Dr. Neff for a very excellent paper.

CHAIRMAN SMITH: Dr. Neff.

DR. NEFF: I should like to say that in a series of cases reported by me where tryparsamid was used, we had nothing whatever to say about the patients' general improvements, nor did we have anything to say about serological changes. This is merely a preliminary report. Quite soon Dr. Lorenz, Dr. Loevenhart, Dr. Bleckwenn and Dr. Hodges and myself hope to have in print a series of more than two hundred cases in which we hope to give you information regarding eye changes plus general improvement plus serological changes. We feel it is quite interesting.

Complications of Suppurative Inflammation of the Middle Ear*

BY RICHARD C. SMITH, M.D.,

Superior

The general practitioner should have some elementary knowledge of the more common complications of suppurative otitis. The importance of these complications can hardly be exaggerated. We might ask ourselves, for example, why are applicants with chronic running ears rejected by insurance companies and by the army and navy? It is not because of the otitis itself, but because of the danger of intracranial complications that these applicants are not looked upon with favor. Moreover, in cases of chronic purulent otitis media, complications are the rule. Then, too, the transition of purulent otitis media into chronic otorrhea nearly always can, and surely ought to be avoided. Most important of all, the general practitioner is first to see these cases, especially those arising from the acute infectious diseases, such as scarlet fever and influenza. For all these reasons, the physician should understand, as far as possible, the complications of otitis media and should be able to make an early diagnosis, approximately at least, so as to recommend timely and often life-saving treatment.

First of all, it is well to understand that suppurative otitis media is practically always secondary to a nasal or nasopharyngeal infection, which extends to the tympanum by way of the eustachian tube. The causes of otitis media, as will therefore be plainly seen are many, comprising the whole

pathology of the nose and nasopharynx. This is one of the reasons why the complications of this disease are of so multifarious a character, and are so apt to be serious.

As I have already suggested, the danger of otitis media is not the otitis media itself, but the serious complications which may develop. Even the most common complication, mastoiditis, is a very serious condition, just because it does open the way for an endless chain of other complications: Facial nerve paralysis, labyrinthitis, cerebellar and cerebral abscess, lateral sinusitis, and diffused purulent meningitis.

GENERAL ETIOLOGY

I will deal with each of these complications in its turn; but, first of all, I should like to have you consider for a moment the general etiology of the whole situation. The hub of the wheel, so to speak, is the middle ear. Or we may call the middle ear the nest in which all these troubles hatch and then fly out in every direction. (The extension of the infection from the middle ear may, in fact, occur in any one or more of six different directions: Backward, upward, inward, forward, outward, downward. The extensions backward, upward, and inward, are of especial interest, because the complications which thus result are the most serious. If the disease extends backwards, the infection will invade the antrum and mastoid process, and, in some cases, the pus will escape through the external cortex of the bone. Where rupture takes place upon the external surface of

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the mastoid, it is commonly supposed that all serious danger of involvement of the intracranial contents is at an end. This is an error, particularly in the case of children, for here the sutural lines between the various portions of the temporal bone are not completely ossified, and internal infection is by no means impossible. It may also break through the bone internally into the region of the lateral sinus. Extension *upward* through the tegmen is less frequent. The existence of the so-called "physiologic gaps" in the bony walls of the tympanum facilitates greatly the extension of infection to these regions which are usually adequately protected. In children especially, the petrosquamosal suture affords ready access to the middle cranial fossa. Extension *inward* involves the labyrinth and is much more common than was formerly supposed. The labyrinth becomes most frequently infected following an erosion of one or another portion of its inner wall or of the capsule of the labyrinth. This pathologic process results, as a rule, from chronic infective disease of the middle ear, and only rarely from the acute infective form. Pus from the infected labyrinth may reach the cranial cavity by three routes: (1) Through the nerve channels into the internal auditory meatus; (2) from the cochlea through the aqueductus cochleae; (3) from the vestibule through the aqueductus vestibuli. Pus entering the cranium by any of these routes is particularly prone to cause widespread purulent leptomeningitis. Cases of diffuse purulent labyrinthitis with the clinical symptoms of profound loss of hearing, nystagmus, nausea, high temperature, etc., demand prompt and efficient surgical intervention. Extension *forward* is not common. It may take place by way of the glaserian fissure or the eustachian tube when the latter passage is blocked. Abscess of the wall of that structure may occur, leading to its disintegration. Extension *outward* is generally prevented by the freedom of drainage through the meatus, but when from any cause, it becomes obstructed, ulceration and sloughing of the tissues may occur, with, sometimes, abscess formation in front of the tragus, or anywhere around the external ear. Extension *downward* is also rare. It may affect the jugular bulb, which lies just below the floor of the tympanum (where there is sometimes a dehiscence in the bone) or the internal carotid artery which runs through the pars petrosa.)

COMPLICATIONS

We are now in a position to consider, each for itself, some of the various complications of suppurative otitis media: Facial nerve paralysis, labyrinthitis, extradural and cerebral abscess, cerebellar abscess, lateral sinusitis and suppurative meningitis.

1. FACIAL PARALYSIS

The first of these, namely, the facial paralysis, is not, to be sure, a fatal affair, and yet it is of very great importance.

One side of the patient's face is drawn over to the opposite side, producing distortion distressing to all beholders. In order to avoid permanent paralysis it is important to intervene early. One should especially avoid ascribing to cold what is the result of an aural suppuration. Such a mistake in etiology leads to such futile treatment as that by electricity, while, all the time, the pus, which is the cause of the trouble, remains unre-
 moved. (When facial paralysis supervenes, the indication is to operate as speedily as possible—if the otitis is acute, opening the drum membrane by paracentesis; if mastoiditis has just set in, then by opening the mastoid cells, including the antrum; if the otorrhoea be chronic, then by doing a radical operation; i. e., by not only opening the mastoid but also by going on and exenterating the tympanum and throwing the tympanum and the exenterated mastoid into one great cavity.)

B. LABYRINTHITIS

The next important complication is labyrinthitis. It will be diagnosed by the following symptoms:

1. A preexisting otorrhoea.
2. The appearance, during the otorrhoea, of general symptoms, as headache and fever, together with local signs, as tinnitus, deafness, vertigo and nystagmus. The most characteristic symptoms are the vertigo and the nystagmus. Let me repeat that the gravity in these cases is extreme; for suppurative labyrinthitis always terminates in meningitis.

3. EXTRADURAL AND CEREBRAL ABSCESS

We now come to extradural and cerebral abscess. In extradural abscess, pus from the mastoid works through the roof of the antrum, separates the dura from the bone, and produces an abscess between bone and dura. The symptoms are so vague, that, ordinarily, the diagnosis cannot be made prior to

operation. The condition may, however, be suspected, if there is persistent headache during otitis or mastoiditis.

Cerebral abscess, like extradural abscess, is difficult to diagnose prior to operation. We may say, however, that any person with an aural discharge who develops continuous headache, debility, loss of appetite, and general wasting, may be suspected of harboring a cerebral abscess. In a considerable proportion of cases, symptoms are, at least in the early stages of this complication, altogether absent. This is one of the most remarkable facts in surgery. In the later stages we are likely to have slight fever, or even subnormal temperature, together with symptoms of compression and localizing signs.

In cerebellar abscess we have the same difficulty of diagnosis, and, when this complication is present, much the same symptoms. There is, however, in addition, apt to be loss of muscular coordination about the body, and the vertigo is nearly always present and is apt to be more strongly pronounced than in cerebral abscess.

4. LATERAL SINUSITIS

Lateral sinusitis, i. e., infection and thrombosis of the lateral sinus, is unlike cerebral and cerebellar abscess, easy to diagnose. The onset of this complication is sudden. There is a severe rigor, followed by sweating, headache, retromastoid pains, and such grave general disturbances as are shown by earthy color of the face and great digestive troubles. There is, in fact, an aural septiceemia; i. e., a general septiceemia of aural origin. If the patient lives long enough and the clot does not organize and grow to the wall of the vessel, it disorganizes; i. e., breaks down into emboli, which pass into the general circulation, produce infarctions and abscesses in various organs of the body. The lungs are, of course, the most frequent site of these embolic infarctions, and for the simple reason that the emboli, passing from the sinus into the heart, go then via the pulmonary arteries, to the lungs, and are generally arrested in those organs. To reach other organs of the body, they are obliged to slip through the lungs, back into the heart, and out of the heart via the aorta.

The thrombosis may extend from the lateral sinus to any of the other sinuses of the skull, and it may pass downward into the internal jugular

vein of the neck, and so on to the superior vena cava. In all these cases symptoms occur corresponding to the anatomical structures involved.

5. SUPPURATIVE MENINGITIS

If all these preceding complications of otitis media seem to be very terrible, what shall be said of suppurative meningitis, that chief dread and nightmare of the otitic surgeon? Probably no other complication that the aurist ever has to deal with gives him half so great or so frequent a sinking of the heart. Nor does any other complication fill him with so frequent and so bitter regret for opportunity lost at the onset of the disease.

Suppurative meningitis may occur either from any of the other complications of otitis media, or from the otitis media through the blood or lymph channels direct. The symptoms are, at first, those of meningeal irritation only; stiffness of the neck, vertigo, restlessness, vomiting, high temperature, delirium and convulsions. Later, the symptoms are those of a certainly present suppuration of the meninges; namely, paralysis of the eye muscles with resulting strabismus and inequality of the pupils. A curious fact is that, in localized, or tegmental, suppurative meningitis, most of the symptoms may be absent. This, it will be remembered, was found to be the case also in cerebral and cerebellar abscess. Often, in localized meningitis, the only symptoms are headache and fever. In ambulatory cases, even these symptoms may be wanting. Then, suddenly, terrific symptoms may appear and the patient may die in an almost incredibly short time.

An efficient aid to diagnosis is a lumbar puncture. This should be done in all doubtful cases; for it shows not only whether a meningitis is present, but also what the variety is. A bacteriological examination should always be made, likewise a cell count. In pronounced otogenous meningitis, the spinal fluid is cloudy, and there are polymorphonuclear leucocytes, together with, in many cases, streptococci, diplococci, and streptococci mucosi. In severe cases, streptococci are always present, though they may have to be looked for diligently.

When a diagnosis of otitic meningitis is made, it is too late to save the patient's life. The chapter of meningitis is, in fact, the saddest in all otology. In a well developed otogenous meningitis, the diagnosis is equivalent to a sentence of

death. We cannot cure otitic meningitis. In a great many cases, however, we could have prevented it by early diagnosis and treatment.

SUMMARY

What, gentlemen, is the chief lesson which can be learned from all these complications of suppurative otitis media? It is this, that these complications, terrible and far-reaching in their effects as they are, have their point of origin in one spot; namely, the tympanum. The tympanum, as I have already stated, is the nidus, or nest, wherein all this devilish brood of otitic complications gets its hatching. From this nest the fledglings fly out, sometimes in one direction, sometimes in many, carrying, not only to other portions of the cranial cavity, but all about the body, infection, pain, disability, and, very often, death. The lesson is, further, that inasmuch as the disease (for it is all one disease with many ramifications) comes to the general practitioner, ordinarily speaking, in the middle ear stage, it is upon that highly important functionary that the duty involves of killing all these terrible troubles in the shell, destroying them before they hatch out.

Now, how can this be done? By prompt diagnosis and early paracentesis. Above all things do not lean on palliative measures while the time goes by during which the killing could occur. Thousands of people have needlessly died of otitic complications, while the only treatment which had been instituted was the dropping of laundinum into the external meatus, or of cocain and adrenalin, or the application of the galvanic current to the affected parts.

As I have stated previously, brain abscesses and sinus thrombosis may result from suppurative otitis media, but secondary brain abscesses are also met with secondary thrombosis of some of the other venous sinuses. Primary aural infection and the primary sinus thrombosis may cause secondary thrombosis and brain abscesses upon the opposite side. For this reason, one can easily appreciate the problem which confronts the otologist when he attempts operative interference in these cases at this late stage. Early diagnosis and treatment might prevent the above unfortunate chain of complications with its high mortality.

One of the most important conclusions to be drawn from all this paper, as well as from other

matters into which I have had no time to go, is this: In absolutely every case of scarlet fever, typhoid fever, influenza, and all the other acute infectious diseases with a tendency toward ear complications, the ear drums should be examined, and examined repeatedly.

Some of the men in our section of the country have procured electric lighted otoscopes, and are making these examinations as a matter of practice. If the family physician will routinely examine the ear drums in making his physical examinations, he will soon be able to recognize a normal drum membrane when he sees it.

Do not forget, gentlemen, that the middle ear is practically a closed cavity. In case of infection, rupture may take place favorably through the drum membrane. Appendicitis, it is said, occasionally recovers spontaneously by drainage into the caecum, but also in some unfavorable cases, rupture takes place into the peritoneum, or in case of the ear, into the meninges.

If the drum membrane is bulging, open it or see that it is opened. In the presence of an ordinary abscess, we do not hesitate to open it. Why behave differently here? Do not dread paracentesis. Properly performed, it has never yet made a patient deaf.

Finally, when these complications do occur—when you are confronted with intracranial complications of otitic origin, never temporize. Do not wait for the diagnosis to be positive and well established, coma and paralysis for example. Be content with plain probabilities. Have the patient seen and, perhaps, operated the same day by an aurist or surgeon.

DISCUSSION

DR. WILSON W. HUME (Milwaukee): Mr. President: In these otitic conditions mentioned in Dr. Smith's paper, I feel that the most important factor is that of early diagnosis of the mastoiditis. Nearly every general practitioner will open the ear drum in order to drain the middle ear; if not, the case is referred to the specialist who will do so. Many of these discharging ears will clear up but if infection invades the mastoid then there should be no time wasted. Nearly all these complications which Dr. Smith has so well enumerated are directly following upon mastoiditis and the early diagnosis of the mastoiditis will often save the patient many of these terrible complications.

A mastoid operation is a very simple operation. You general surgeons don't hesitate for a moment if a patient complains of severe abdominal distress, vomiting, pain and tenderness over McBurney's point coupled with some

of the other diagnostic symptoms of acute appendicitis, to go into the abdomen. You go in with as little delay as possible and eradicate the trouble by removing the appendix. The mastoid is the appendix of the head and when the patient complains of having tenderness over the mastoid following middle ear abscess, don't delay, get that mastoid operation done, then your patient ought to recover without these terrible complications.

I think the most serious complication (I have had a few) is that of meningitis, since there is very little we can do that will save our patient. In the sinus thrombosis cases, if the condition is recognized early, the patients can be saved in the greater percentage of cases. I have in mind a case which we had in the Milwaukee Hospital with a streptococcus hemolyticus infection in which there was much delay in making the diagnosis of acute mastoiditis. He had been seen by his doctor and by a specialist, the expectant treatment being employed for a period of nearly three weeks following onset. He was taken to the Milwaukee Hospital finally and operated upon for an acute mastoid. All the inner plates were found intact. His temperature varied between 104 and 106 and the pulse running wild between 120 and 130. A lumbar puncture was done on the fourth day which was followed by a chill. Blood cultures were then done and came back with streptococcus hemolyticus throughout. I then advised immediate operation on the sinus and jugular. Then ensued a fight with the parents and other relatives; they would not give consent to the second operation. Finally after twelve hours' delay, consultation with Dr. Grove and, as a last resort, the aid of their priest, we obtained permission and the operation was done at midnight of the fifth day following mastoid operation. The packing was removed, sinus plate removed, sinus laid open, infected clot removed and free bleeding obtained from both ends of the resected vessel. Bleeding was arrested by the use of iodoform plugs and cavity packed. The neck operation was done, the jugular with its tributaries being tied and the jugular resected. Our patient almost died on the table, but reacted very quickly upon being put to bed. His hemoglobin at the time of the operation was fifty per cent. The boy picked up fifteen per cent in hemoglobin the first week, post operative blood cultures were normal and from then on his recovery was rapid. I saw him on the street a while ago and he is a very robust young fellow.

I am only drawing this picture to show you what might happen in one of these complications if an acute mastoiditis is allowed to go unoperated. These are very serious complications and if the general practitioner will only keep this in mind, that after paracentesis has been done, the patient should be watched daily and if there is any evidence of mastoid tenderness and you are convinced of its presence, there should be no further delay. Operate immediately and you will prevent nearly all of these terrible complications. Thank you. (Applause.)

DR. G. E. SEAMAN (Milwaukee): Mr. President, I think the chief lesson of this interesting paper is the relationship that exists between intelligent observation

in the very beginning and the prevention of these complications that have been portrayed by the essayist. I believe that the general practitioner is getting away from the methods of observation in more recent years. It seems to me that twenty-five or thirty years ago men who did general work were more apt to pay attention to these comparatively simple diagnostic means, and especially those in the field of eye, ear, nose and throat. I remember very well men in general medicine who were very skillful in the use of the ophthalmoscope and very skillful in the use of the otoscope and the laryngoscope, and it seems to me that even the younger men in medicine today are not paying the attention to these diagnostic means which, after all, are much more simple than other diagnostic means to which they do pay attention and which perhaps in many cases are of less importance. There is no reason why a general practitioner should not make an intelligent, skillful examination of the ear. It can be learned very easily; it should be learned, and so with an examination of the throat.

Personally, I do not like the term paracentesis. It isn't a paracentesis which carries with it an idea of a puncture that is needed. It is an incision of the drum that is needed. I would not go as far as Dr. Hume in the matter of immediate operation based on mastoid tenderness. A great many cases of middle ear complication, of mastoid complication, if you please, as evidenced by mastoid tenderness, will recover so that to my mind the mere presence of mastoid tenderness does not mean an immediate operation. However, a case with mastoid tenderness should be under skillful observation. To repeat, it seems to me that the lesson of this paper is that strict attention, early recognition of signs and symptoms that point out danger should be in the mind of the general practitioner as well as the specialist in handling these cases. (Applause.)

DR. R. G. SAYLE (Milwaukee): This is not my specialty. I got up mostly to take exception to watching mastoid tenderness. I would watch mastoid tenderness about as long as I would watch appendicular tenderness. There is no harm particularly in opening a mastoid, and you may do away with a lot of danger. There is no particular harm in removing an appendix or making a mistake in diagnosis of appendicitis. If I open an abdomen on suspicion for appendicitis, my conscience won't bother me very much and it won't bother me very much if I open the mastoid on suspicion. If a tender mastoid were sent to me, I would suggest, if I didn't open it myself, that it be opened. I would take no chances with a tender mastoid. There is no particular harm in opening a mastoid any more than going into the abdomen after an appendix, no contradictions being present otherwise. That is the point I wish to make and I want to make it strong. (Applause.)

SMALLPOX IN TWINS AT BIRTH

James A. Martin, Lumberton, N. C. (*Journal A. M. A.*, July 25, 1925), reports the case of a woman who, while in the second stage of a very severe attack of smallpox, gave birth to twins. Both babies were born in the first, or papular stage, of smallpox. The mother entirely recovered. The babies are now in the last stage of desiccation, and look as if they will make an uneventful recovery.

Conservative Treatment of Chronic Suppurative Otitis Media*

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All cases of chronic suppurative otitis media should have a general physical examination to eliminate systemic infection, especially tuberculosis and syphilis. Von Colditz,¹ believes that a tuberculin test should be done in every case. The writer has a Wassermann done in all this type of cases and at times resorts to a provocative test, as shown in a previous paper.² If the patient is in a run down condition, tonics such as iron and arsenic ought to be given. Marked deflection of the nasal septum should be corrected, nasal polypi removed; however, Shambaugh,³ states that "he has never seen a case in which there was any evidence supporting the view that intra-nasal obstruction has an unfavorable influence on middle ear suppurative disease." Haskin,⁴ in this respect, agrees with Shambaugh. Purulent infection of the nasal sinuses should receive attention. The patient taught how to blow his nose. Infected tonsils and adenoids must be removed, as chronic or acute inflammatory conditions of the nasopharynx may prolong suppuration in otitis media. Any teeth showing apical infection, especially with regards to the improvement of hearing, should be extracted. In fact, any focus of infection, whether it be in the nose, throat or prostate in men, should be eradicated.

TWO TYPES

In the discussion of the conservative treatment of chronic suppurative otitis media, we should emphasize two distinct types:

1. Where the inflammatory changes are restricted to the mucous membrane lining the middle ear chambers.

2. Where these changes are associated with a bone invading process. The former are more frequent and constitute, as a rule, the relatively harmless affairs from which serious intracranial complications seldom, if ever develop. The latter are the rather exceptional cases of chronic middle ear suppuration, but are the cases which are a distinct menace to the patient in that, very often they lead to serious and fatal intracranial complications.

Simple cases of chronic otitis media call for

conservative treatment, which should not be replaced by the radical treatment, even when the conservative treatment does not entirely check the discharge. The cases where the disease has extended to the temporal bone are those where conservative treatment will not suffice.

The anatomy of the mucous membrane lining the normal middle ear, insofar as the conservative treatment is concerned in chronic otorrhea, should be discussed; for according to Callison,⁵ this lining must be materially altered to affect a cure. He quotes from Quain's Anatomy, "the mucous membrane which lines the cartilaginous part of the eustachian tube resembles much the mucous membrane of the pharynx, with which it is immediately continuous; it is thick and vascular, is covered with ciliated epithelium, with many simple mucous glands which pour out a thick secretion; in the osseous part of the tube, however, the membrane becomes gradually thinner. In the tympanum and mastoid cells the mucous membrane is paler, thinner and secretes a small amount of less viscid, yellowish fluid. According to most observers, no glands are normally met with in the tympanum, but Krause has described and figured simple glands in these parts, and Troeltsch describes an acinous gland on the lateral wall anteriorly. The epithelium of the tympanic cavity is, in part, columnar and ciliated, with small cells between the bases of the ciliated cells, but the promontory, the ossicula and the drum membrane are covered with a simple layer of flattened non-ciliated cells (Kolliker); and a similar non-ciliated epithelium lines the tympanic antrum and cells." The character of the discharge in some of these cases strongly confirms the presence of mucous glands in the middle ear, and in order to obtain a result it is necessary to alter the type of epithelium and destroy the glands.

In a clinical cure the discharge is stopped and the condition becomes latent, subject to reinfection from any future infection of the nasopharynx. Unless we have a complete dermatization of the promontory and all exposed areas, extending from the otitic opening of the eustachian tube, or a complete restoration of the drum membrane we do not have an anatomical cure. To obtain these results it is necessary to destroy all

*Read before Milwaukee Oto-Ophthalmic Society, March, 1925.

granulation tissue. If it is possible to affect a restoration of the drum membrane together with a healthy renewal of the mucous membrane, this condition will suffice. Where the destruction of the drum has been so extensive that it cannot be restored, it is necessary to destroy the mucous membrane together with the mucous and serous glands lining the middle ear and a resulting simultaneous extension of the squamous epithelium from the auditory canal over the exposed areas to obtain a dry ear. The condition should be such that there is no possibility of secretion or collection of fluid. The eustachian tube should be closed off with scar tissue if possible, but it is not absolutely necessary.

EFFICIENCY OF DRUGS

It is important to touch upon the efficiency of the drugs used in the conservative treatment as outlined by Callison and with which the writer has had a large number of pleasing results.

1. For the destruction of granulation tissue, a solution of silver nitrate is used instead of the bead, in that the solution will spread laterally by capillary attraction to parts not directly reached by the application, whereas the bead is only efficient where it can be brought in direct contact with the tissue to be treated. At times tri-chloroacetic acid 95 per cent is also used. It must be remembered that very often patients will experience considerable pain in administering these drugs.

2. Drugs for controlling the infection and assisting in the elimination of the bacterial flora and at the same time penetrate granulation tissue and any discharge that may be present and will not coagulate albumin. Phenol, iodine, mercurochrome 220 and acriflavine do not coagulate albumin and have highly antiseptic and penetrating power. These drugs must be used in fairly high alcoholic content. The presence of water in the ear tends to stimulate granulation tissue and fails to penetrate into the tissues.

SIMPLE CASES SUBDIVIDED

The simple cases of chronic middle ear suppuration where the disease is limited to the involvement of the mucous membrane lining, may be divided into three subdivisions:

1. Cases with a heavy mucoid discharge.
2. Cases with a frank purulent discharge.

3. Cases with a sanguineous discharge usually associated with aural polypi.

In the first type, this is a small but important group of cases met with in practice. The discharge is so thick and tenacious that it interferes with the penetration of any drug into the affected parts. It is very difficult to wipe away with a cotton applicator. The perforation of the drum in this type is usually small. Suction has been most reliable in removing the discharge. High vacuum is not necessary and the treatment is not very painful. Suction should be resorted to as long as any secretion can be drawn out. At times irrigation is necessary and a solution of sodium bicarbonate is used. After the ear is cleansed and dry the treatment is the same as described in the next type.

Purulent discharge is the type most frequent. It may be so slight that the patient is not aware of the fact, or it may be profuse. The drum membrane in these cases usually exhibits a large perforation or is greatly destroyed. The discharge is cleared away and the parts rendered as dry as possible with a 75 per cent solution of alcohol, followed with a dry cotton applicator; then a 25 per cent solution of silver nitrate is applied to the exposed parts of the fundus over the promontory and under the edges of the remaining drum. The first application may be quite painful. The silver solution should be increased to a saturated solution as early as possible and should be used quite freely, so that it may reach any remnants of the drum membrane, into the eustachian tube and as far up into the attic as it may go. The object, to destroy granulations of long standing. The treatment must be intensive. The patient is given a prescription for "ear drops" consisting of:

Phenol 95 per cent.....	m XV
Tinc. iodine	m XV
Alcohol	z IV
Water	z I

In some cases the writer has been using a solution of mercurochrome 220:

Mercurochrome 220	1 gm.
Water	70 cc.
Glycerin	30 cc.
Alcohol	100 cc.

The treatment in the third type is practically the same as in the first two after the aural polypi have been removed.

Friel advocates zinc ionization in chronic suppurative otitis media of the above described types. Other observers report excellent results by use of the quartz lamp.

Class II. Where the inflammatory changes of the mucous membrane lining of the middle ear is associated with a bone invading process, Haskin⁴ believes that in cases showing caries of the ossicles the latter should be removed when possible, but areas of caries are often cleared up by the use of enzymol with its dilute hydrochloric acid component. Using the solution for periods of 20 minutes twice daily, the canal being filled with the solution. In cases of cholesteatoma he uses a solution of alcohol and hydrogen peroxide, equal parts, allowing this to remain in the canal for about 15 minutes and removes all the debris from the parts with instruments when possible. After which he dries the cavity with a 75 per cent solution of alcohol, following this with a dusting powder of nosophen and zinc stearate compound. He states that he has had excellent results in a great many cases with this treatment and that of 800 cases of suppurative ears, he has had but 21 radical mastoids.

Watery solutions should not be used in cases of cholesteatoma, as water causes these masses to swell and will stimulate granulation tissue. The

treatment in this form of chronic otorrhea cannot be restricted to conservative measures at all times; of course we have exceptional cases where the conservative treatment will effect a cure or a spontaneous healing takes place. This may occur in cases where the process is limited to the walls of the tympanum or where only the ossicles are involved, also in cases of attic suppuration with more or less destruction of the margin of Rivini's segment. A cholesteatoma in the antrum may extrude itself by destroying the upper posterior wall of the bony meatus, leaving the tympanum and the antrum one cavity with a thin layer of epidermis. However, in spite of all treatment and every effort, in a great number of these cases the process goes on progressively, extending to the invasion of bone.

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The Indications for the Radical Mastoid Operation*

BY WILLIAM E. GROVE, M.D.,

Milwaukee

In no portion of our field is so little real surgical judgment used as in determining the indications for the radical mastoid operation. Cases are rushed to the operating room which are manifestly not chronic mastoids but chronic otitis medias of mucous membrane infection with persisting central perforations which are from time to time reinfected from the nose and throat by way of the eustachian tubes. To operate on these so-called wet ears does not benefit the condition, does not stop the discharge, causes a reduction of the hearing and in general brings this very valuable operation into discredit.

On the other hand, cases of chronically discharging ears with foul discharge from bone caries or cases of cholesteatom which are as it were sitting over a barrel of gun powder, are carried along

from year to year with washings, irrigations, powder dustings, light treatments and so forth. At any moment an intracranial complication may ensue that will snuff out the life of the patient.

It is manifestly impossible to state in an arbitrary fashion all the indications for the radical mastoid operation. Chronic purulent otitis media is a very elastic term covering a large variety of conditions. Some of these conditions are very dangerous to life. In others, again, the danger of intracranial invasion is exceedingly rare. Each case must be carefully studied and judged on its own merits. Every effort should be made to correct the condition by nonsurgical means before resorting to the radical operation, being careful, however, to intervene before serious complications ensue.

It is not hard to decide on an operation when

*Read before Milwaukee Oto-Ophthalmic Society, March, 1925.

we are dealing with a case presenting definite urgent pathology, but it is sometimes difficult to make this decision on a case which has a definite bone lesion, but no urgent or disquieting symptoms.

Someone said to Koerner at one time that he hoped he might see Koerner perform a radical mastoid operation, to which he replied: "Well, we may have to wait for a proper case. There are so many cases of chronic purulent otitis media, but so few in which the radical operation is really indicated." Koerner is probably very conservative in this respect.

He regards it as an absolute indication for the radical operation as soon as the diagnosis of bone caries with or without epidermization is established.

When the diagnosis of bone caries is uncertain the operation should only be done under the following circumstances:

1. As soon as earache and one-sided headache occur in a case of chronic purulent otitis media.

2. Upon the occurrence of circumstances which are favorable to the production of an intracranial complication; in other words, signs of a purulent involvement of the labyrinth or the facial canal.

3. Upon the first signs of the beginning of an intracranial complication.

Koerner does not believe that the mere presence of a chronically discharging ear gives us the right to operate.

Other indications given by various men are as follows:

1. Fistulous tract leading from the mastoid cortex to the exterior or to the external auditory canal. (Kerrison, Ballenger.)

2. Polyps springing from the promontory wall or the region of the oval window. These should be very carefully removed by the radical operation, because of the danger of their producing a labyrinthine fistula. (Kerrison.)

3. Persistent recurring polyps in any portion of the tympanum showing bone necrosis which conservative methods fail to relieve. (Kerrison and Ballenger.)

4. Very persistent and profuse discharge as evidencing bone disease. (Kerrison and Ballenger.)

5. Chronic ear discharge with neuralgic pains over the mastoid. (Ballenger.)

6. Chronic ear discharge and septicaemia. (Ballenger.)

Both Ballenger and S. MacCuen Smith lay special stress on the value of the probe in finding bare bone in the tympanum or attic.

Ballenger and Kerrison are diametrically opposed in their viewpoint regarding the radical operation in cases of labyrinthine suppuration. Ballenger gives labyrinthine involvement as evidenced by nystagmus, dizziness, nausea, staggering gait and profound deafness as a definite indication for the radical operation, while Kerrison holds that if these symptoms appear in a case of chronic otitis media and are found to be due to suppurative labyrinthitis, the radical operation is positively contra-indicated. He, therefore, gives it as his dictum that "no patient should be subjected to the radical mastoid operation until his labyrinth has been carefully tested for evidences of suppurative labyrinthitis." (Sudden onset with deafness, vertigo, nausea, nystagmus and temperature.)

ABSOLUTE INDICATIONS

All authors are practically agreed that the presence of bone caries or of a cholesteatom are absolute indications for the operation and I feel that we can safely follow their advice and operate when these conditions are present. With regard to the other indications given by the various authors we must use our judgment after carefully studying each individual case on its own merits. On account of the fact that some of these patients present themselves with very good hearing and one is loathe to do anything which may reduce this hearing, one of the modified radical operations might be considered. Personally, I must confess that I have never had much faith in the Heath modification, but I can see where in certain cases the operation more recently proposed by Barany might have some merit in this respect.

Barany carefully chisels down the posterior canal wall to and including the annulus without doing any injury to the membranous canal wall. This membranous canal wall, together with the tympanic membrane, are then carefully displaced forward in order to bring the tympanum and the attic into view. When the work here has been completed the post auricular wound is sutured, all except the inferior angle into which a drain is inserted. The external canal is carefully packed in order to maintain its lumen. In this way no large pad of granulations forms with resulting scar tissue contractures and stapes fixation.

Observations in the Eye Clinics of Vienna

BY EDWIN C. BACH, B.S., M.D.,

Milwaukee

Editor's Note—The following are a few observations concerning the ordinary and most common diseases of the eye as they are dealt with routinely in Viennese Clinics. The purpose is to bring these suggestions before the general practitioner.

The American Medical Association of Vienna renders a great service to English speaking physicians seeking post graduate work. After joining the association one can immediately secure information regarding courses and clinical work available, so that no time is lost in orientation upon arrival. The clinics in ophthalmology are among the oldest and best organized in Vienna. Because of their convenient locations and systematic management, it is possible for one to secure almost any kind and amount of work desired. The professors and their assistants are truly scientific men—many spending most of their lives in research, and in supervising the care and treatment of a vast clinical material for love of the work and for little or no financial remuneration. Since the war, however, and with the decline of Austria, many of the younger assistants seem to have opened their eyes to the value of the dollar and are asking higher fees for their courses and for the individual attention they give the post graduate worker in the clinics. They are, however, all excellent teachers, polite and patient in manner, but insisting upon accuracy and thoroughness in diagnosis and correctness of the smallest details of technique. In discussing clinical conditions with them, one finds that they are well acquainted with the world's literature on their specialty.

There is a large and varied material to be had in the clinics. The attitude of deep respect of the patient toward the physician is immediately noticeable. Patients are only too glad to submit to repeated unpleasant examinations, and almost invariably follow the physicians recommendations and advice without question; a fact which could not easily obtain in our own country.

What follows is based on observations in Vienna. No attempt is made to discuss etiology and pathology or the latest theories and findings concerning eye disease. The field is too extensive. The subject is limited only to common conditions,

and offered as practical suggestions to those general practitioners who have ophthalmological cases come to them for treatment or advice.

FOREIGN BODIES OF THE EYE

A penetrating foreign body is, of course, always a most serious condition and not here considered. Because of the frequency of multiple foreign bodies, a complete research of all parts of the eye is always made, even though a single foreign body is immediately obvious. Simple removal with no after treatment is the practice if the conjunctival surface only is the site. In case of foreign bodies of the cornea, a three per cent solution of cocaine is used for anaesthesia. This is isotonic with tissue fluids and does not cause the burning sensation of higher concentrations. For removal, a sharp spud is preferred because the painful erosion of epithelium which follows the use of a dull spud is obviated. In the Dimmer clinic the favorite after treatment is the instillation of one per cent of yellow oxide of mercury ointment, and a bandage for twenty-four hours. In the Meller clinic a drop of one per cent homatropine is instilled to relieve the discomfort caused by hyperemia of the iris which usually follows a corneal injury. A five per cent orthoform with 1:3000 bichloride ointment is then put into the eye, which is bandaged for twenty-four hours. Patients are always required to return in a day or two for observation.

CONJUNCTIVITIS

In the treatment of acute and chronic conjunctivitis silver nitrate is considered the drug without a peer. It is probably one of the oldest drugs used in ophthalmology, but in spite of the many preparations which have been brought forth to replace it, it is considered by the Viennese the best for a prompt, good result in diseases of the conjunctiva. Silver nitrate is indicated in other ocular conditions too, so a few words as to its action would not be out of place. It produces four beneficial effects. First, it causes an active congestion which is accompanied by a relatively long period of leucocytosis of the conjunctival sac; secondly, it is escharotic, removing the infected and less vital superficial epithelium, and stimulating growth of a young and more resistant epithelium; thirdly, it is astringent. This action aids in the resolution of enlarged lymphoid follicles

and relaxed conjunctiva which is characteristic of most types of conjunctivitis; fourthly, it is directly germicidal to those organisms with which it comes in contact. The one objection is the burning sensation which accompanies its use, and for this reason has been discarded in favor of less efficient but more comfortable remedies often to the detriment of the patient. The cause of excessive burning is due to its effect on the cornea, or to the use of too strong solutions. The technique in Vienna is to use an applicator wound on both ends with cotton. One end is dipped into the silver solution, and the other saturated with physiological saline. The everted lids only are gently wiped with the solution and the excess immediately washed away and neutralized with the saline. Only a mild temporary discomfort follows this method, and the excellent results of its use still follow. Silver nitrate is used in strengths varying from one-fourth, to a two per cent solution.

There is, however, one form of chronic conjunctivitis characterized by an eczematous redness at the outer angles of the eyes, which, when it resists the treatment with silver, is usually due to the *Morax Axenfeld diplobacillus*. Zinc sulphate is specifically lethal to this organism and is prescribed in one-half per cent solution to be instilled twice daily.

The organic silver preparations are used much less in Vienna than in the United States, and are considered quite inert, which, in fact, they are. The only merit lies in a protective covering which they seem to give to mucous membranes.

It must be remembered too, that often there is some underlying cause of chronic conjunctivitis. More commonly the cause is poor general health, or malfunction of the lacrymal apparatus, eye lids, or eye lashes.

BLEPHARITIS

This condition is very common in Vienna. The routine treatment is to remove crusts with warm water, dry the lids, and apply ten per cent silver nitrate to the lid margins with a small, tightly wound applicator. When applying this the patient must tilt his head to the side so that tears roll from the angles of the eyes and not dilute or cause the strong solution to enter the eyes. The patient is then instructed to cleanse the lids and apply by massage an ointment of two per cent

yellow oxide or five per cent boracic acid every night.

KERATITIS

In the case of corneal ulcers, temporizing is not indulged in, but prompt cauterization is always employed. In smaller and less progressive ulcers, phenol, tincture of iodine, or twenty per cent zinc sulphate is applied with a very fine, tightly wound applicator. In the more progressive ulcers the thermo-cautery is promptly used. Hot applications, dionine, atropine and later mercurial ointments are used as after treatment. The non-ulcerative types of keratitis are very common in Vienna. With the exception of the use of ultra violet light in the treatment of eczematous (phlyctenular) keratitis; nothing is offered to shorten the usual protracted course of these diseases. Emphasis is laid upon the importance of fresh air, improved hygienic surroundings, and the use of orange juice and cod liver oil.

GLAUCOMA

It is important for the general practitioner to be informed of certain facts of this disease, because so many patients go to him first for advice. Primary glaucoma is classified as follows: First, acute inflammatory, which is the type so well described in text books and easy to recognize. Second, chronic, which has the headache, rainbow halos, mild congestion and diminished vision somewhat like, but less marked than acute inflammatory glaucoma. Third, simple glaucoma. This last type is the most insidious and most frequently unrecognized because the only complaint of the patient is gradual loss of vision. There are no obvious objective symptoms. Since this usually occurs in people past middle life, they frequently have a sclerotic lens nucleus which reflects considerable light. Even by an ophthalmoscopic examination this reflection of light prevents normal illumination of the fundus. Diagnosis of incipient cataract is made, and the patient advised to go home and wait until it "ripens." After a few months the patient is nearly blind, and when he reaches the specialist, the disastrous truth is for the first time discovered.

ROUTINE USE OF MILK INJECTIONS

Several years ago the intramuscular injection of boiled milk was found to have a beneficial effect on some diseases of the eye. It has largely fallen into disuse, however, chiefly because the preparation was not right and the proper indication for

its use was not present. The Viennese believe that they know both how to prepare the milk properly and when to use it. The fact is that they get remarkable results from its use. The method of preparation is to boil a small quantity of unpasteurized milk for exactly four minutes. If boiled longer, or if pasteurized milk is used, the pyrexia which must follow to get results does not occur. A temperature of 103 degrees F. for several hours follows a successful injection. The average adult dose is 10 c.c. into the gluteal muscles. Milk injection is used prophylactically in all penetrating wounds of the eye. It is used in acute intraocular infections and in acute iritis of the rheumatic and focal infection type, and in gonorrhoeal iritis. Milk injections are of little or no value in external eye diseases, or in any chronic conditions. More than two injections are seldom used. It is contra-indicated if a tuberculous focus of any kind is present.

MUSCULAR ABNORMALITIES

The most common anomaly of the ocular muscles is convergent squint. Almost invariably this is due to an attempt to overcome an error of refraction by accommodation, thereby overexercising the associated convergence. The importance of correcting this condition as soon as it appears instead of advising parents to wait a few years cannot be emphasized too strongly. The function of binocular vision is developed in infancy and early childhood, and if a defect is allowed to go too long, the patient not only loses the faculty of stereoscopic vision but also loses a great part of the vision in the non-fixing eye. This condition cannot be corrected in later life and an operation for squint has only a cosmetic purpose. The practice is to correct this defect with glasses in infancy. Children as young as three years of age are patiently trained to wear glasses and a good result usually follows. A mydriatic must be used in the refraction of these cases.

Dr. Warfield Writes of Visits in Austria, Switzerland and Alsace; Believes Action Necessary to Prevent Influx of Foreign Physicians

London, June 30, 1925.

My dear Mr. Crownhart:

Since my last letter from Vienna I have been through the western part of Austria, through part of Switzerland and through Alsace. Needless to say, I had a beautiful trip.

My first stop was at Innsbruck. The city itself is beautifully situated on both sides of the rushing Inn river surrounded by mountains, many of which are snow-capped. On the north side of the city the mountains actually seem as if they would fall upon the city. As my readers know, there is a very old university here with a medical faculty and hospital. I was impressed here more than at Vienna by the evident poverty of the country. The buildings of the medical clinic look old and worn out except for one wing which has had a story added to it within the past few years. The laboratories were small, the equipment was only fair. The staff is trying to put all the modern apparatus into a building already filled. It reminded me of several of our hospitals with which I am familiar. They did have a fine new x-ray machine of a new type which could deliver voltage either for fluoroscopy or for deep therapy up to 180,000 volts. All their photographic work is done without the use of the Brickley diaphragm.

I asked if they preferred it that way and was told that it was by necessity, not by preference. I had a long talk with the assistant in charge of the X-ray department. Among the things he told me was the astounding fact that his salary amounted to twenty-five dollars a month, American money. All the salaries are in proportion. Naturally most of the doctors would like to go elsewhere, preferably to the United States, where, with our lenient regulations, they could soon begin to practice and crowd out our own men. It does seem as if some more drastic means should be taken by the various states to regulate the licensing of the immigrant physician. In no country of Europe, so far as I have been able to discover, can a foreign physician land, pass an examination and begin his practice. In Austria one must become a citizen and that takes time. In France an American must practically go through the Medical School and pass a series of examinations before he is allowed to practice. This requires several years. England discourages the foreign doctor. All the countries take care of their own citizens and see to it that no foreigner gets in without a more or less lengthy compliance with more or less rigid regulations. I should think that this matter would be one to be taken up by the State Society.

I next visited Zurich in Switzerland where I saw Professor Naegeli. Zurich was quite a contrast to Innsbruck. Although the hospital is an old building, it has been kept up splendidly. A new two-story wing for the laboratories has just been completed and plans are ready for a building to house the bio-chemical laboratories and those of chemistry. The clinic is well equipped, the wards are well kept, records are most complete, so that the impression one gets is that here real work is done. Prof. Naegeli is a charming personality and must be a stimulating chief. Just at present he and his whole staff, including an expert physical-chemist who has been in the clinic about fifteen years, are working intensively on the difficult problem of liver function. They have a large mass of figures of all sorts of tests but thus far they are not prepared to say just what has been found. It seems to me that it will be well for us to keep one eye on this clinic. I made rounds with Prof. Naegeli and saw several very interesting cases, but I was disappointed in not seeing a single case of some form of blood disease. He believes that Hodgkin's disease is probably due to the *Corynebacterium Hodgkini*. As I had recently heard Sternberg in Vienna say that he did not believe that this organism had anything to do with the disease, and that he still was not completely convinced that it was not a modified tuberculosis, I was much interested in Naegeli's opinion.

After leaving Zurich I went into the heart of Switzerland as far as Geneva but visited no medical clinics until I arrived at Bern. There I saw three men, two of whom, Prof. de Quervain and Prof. Ascher, have been in "the States" within the past few years. Prof. Sahli has not taken the trip. I saw Prof. de Quervain do two operations for goiter and had a long talk with him. He is much interested in the prevention of goiter among school children and has been active in the propaganda to give children small doses of iodine during the prepuberty period.

Prof. Sahli took me through his clinic and demonstrated his sphygmobolometer, the instrument he has devised for measuring blood pressure. He criticizes all the cuff methods. He claims that they are grossly inaccurate and that he has proved mathematically that his method is the best and at the same time the simplest. He pays little or no attention to the diastolic or minimum pressure. In this viewpoint he is quite opposed to the

opinion of other men to whom I have talked. Differences of opinion such as this are found everywhere in places where I have been. It is interesting, but rather confusing to the student who is going through the medical schools. Again I was impressed by the complete equipment for mechano-, hydro-, electro- and heliotherapy in the clinic. Among all the clinics I have visited there is not one which has not a more or less completely equipped department for these forms of therapy. Certainly we are neglecting methods of treatment which in many cases are of far more importance than the use of drugs. I wish we could impress upon our people that are connected with the building and equipment of hospitals, the tremendous importance of providing space, equipment and help for the department of physical therapeutics.

Next I went to Basil and met Prof. Stachelin, chief of the medical clinic. I saw with him several interesting cases and was taken through the hospital. The clinic there has run down somewhat. Money is needed badly and assistants are few. The buildings are very old and in need of repair. In spite of the very obvious handicaps the staff members are working and producing.

From there I traveled to Strasbourg where Prof. Leon Blum has the clinic formerly presided over by Wenckebach who, as all know, is now in Vienna. In this clinic which is well equipped particularly for bio-chemistry, and where there is an expert bio-chemist attached to the clinic, much work has been done upon the relationship in health and disease between the ions of the blood and tissues, Ca and Na. Prof. Blum is convinced that in the disturbed balance of these two elements the secret of the cure of serofibrinous effusions lies, and the cause of anemia rests. For some years he has been working along these lines and numerous papers have appeared under his own and his assistants' names. The day I was there he was preparing to read abstracts of several papers before the Biological Society. He extended a cordial invitation to me to be present. When I found that the language of the session would be French, I declined. I shall wait until the reports are published. I can understand my French but not a Frenchman's French when he speaks it rapidly. I regretted that I did not have time to remain a while at Strasbourg. Not only is the medical clinic an excellent place to work, but the city of Strasbourg is charming

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FOR THE COUNTY SOCIETY

1. *Program Material.* Pursuant to authorization by the 1924 House of Delegates the Secretary is arranging to make program material available without cost. The following can now be secured:

A. Departmental Officers of the State Board of Health. Address Dr. C. A. Harper, State Health Officer, State Capitol, Madison, Wis.

B. Clinicians of the Wisconsin Anti-Tuberculosis Association when in vicinity. Address Clinic Dept., W. A. T. A., 558 Jefferson Street, Milwaukee.

C. Councilors and Officers of the State Society. Address the individual.

2. *Annual Statements.* Uniform annual statements can be had without cost. Address the Secretary, advising number desired.

EDITORIALS

DEMAND OF THE INDIVIDUAL.

“COMMUNITY health is much in advance of the prevention of illness in the individual. Physicians have been so busily engaged in the care of the acutely sick that they may have had little time and have given scant attention to those who are in apparent health.”

This is on the authority of William D. Haggard and from his presidential address at the 1925 meeting of the American Medical Association. He proceeds to devote a considerable amount of space and eloquent argument to stimulate the interest of the medical profession in the subject of periodic physical examinations as a means of prolonging the lives and promoting the health of the people.

That there is need for such efforts to stimulate the interest of physicians is unquestionable, if conversations with intelligent laymen offer any criterion. Singular, too, isn't it, when one thinks of how much discussion “the incursions of state and social medicine” receive in some quarters—notably the physicians' locker rooms at the hospitals?

The Fords, Edisons, Rockefellers, Carnegies of industry and commerce have capitalized the hitherto unfulfilled wants of the public. So, too, have the politicians of Europe who have foisted state medicine on the medical profession of Europe. And if such a thing ever comes to pass in America, which seems most unlikely, it will be because the private practitioners of medicine leave the field to the politicians and pretenders.

In America, cults have constituted the greatest threat and have actually made the greatest inroads on the prestige of the legitimate practitioners of medicine. This will probably continue to be so because America is characteristically individualistic and “the state” will always—in true democracies—lag far behind the best organizing brains of private citizens. But the thought we are trying hardest to express is that set forth in the opening sentence of this editorial. If prevention of disease in the individual lags behind community health, who but the individual's natural medical advisor is properly to be criticised? There can be no question but there is an actual, if largely an inarticulate, demand on the part of the public

for *individual preventive medicine* sufficient to employ the entire time of double the present number of physicians in America. If we, whose province it is to meet that demand fail to do so, it behooves us not to complain if some other agency attempts it.—H. E. D.

DR. ALBERT J. OCHSNER

1858-1925

DR. Ochsner's career was founded upon simplicity, kindness and work. His successes were extraordinary. He earned them. His unusual abilities were widely and generously recognized. He merited more honors than he received. His friends were many and devoted. His faith in them was constant. He was loyal. He stood uncompromised by his beliefs.

The medical profession and the laity owe him much. No more fitting and deserving tribute can be paid him than by advancing the good work he preached and practiced. Our indebtedness, great as it is, can be discharged. Our payment will bring pleasure and benefit to all concerned.

—J. L. Y.

A MUCH DEBATED QUESTION

IN Dr. Warfield's last letter from abroad, contained in this issue, he suggests that the earnings of foreign physicians generally, are so low as to make it extremely desirable for a great many to migrate to this country. Dr. Warfield believes that “more drastic means should be taken by the various states to regulate the licensing of the immigrant physician.”

This is a much debated question. Dr. Warfield's position has many proponents and as the letter states “in no country of Europe, so far as I have been able to discover, can a foreign physician land, pass an examination and begin his practice.”

This Journal believes that somewhat stricter regulation might be adopted in Wisconsin. It is evident that the physician who understands and speaks the language of his patients but poorly, lacks a basic prerequisite to competent treatment of the sick. It is also evident that considerable opportunity exists for a low standard physician of

foreign birth to present imposing, but meaningless, credentials as a basis for reciprocity. In Wisconsin our State Board of Medical Examiners has met this latter situation by providing that the secretary must verify all foreign credentials by direct communications between the board and the colleges concerned.

The basic question of whether a foreign physician should be eligible to practice in this and other states without at least having taken out his first papers, is still unanswered. It is a question that deserves thought and study by our State Board of Medical Examiners in the interests of the people of the state.

TWO OF OUR GREATEST

WE reprint, herewith, an editorial from the American Review of Tuberculosis which we wish might have been written as an original editorial for this Journal. This evaluation offers our justification to what may at first blush appear to be a lazy, hot-weather expedient for filling our space.

Ordinarily we will not include reprint material in our editorial columns. In this instance, however, we know that the circulation of the admirable Review is very limited and we wish our readers to share in the possession of this clean cut etching of two of our greatest American physicians.

OSLER AND TRUDEAU

MUSINGS ON CUSHING'S LIFE OF OSLER

Osler was Anglo-Saxon with the charm of the Celt; Trudeau was half-French, half-American, with the charm of the French. Curiously, one came directly from Canada; the other claimed it as the land of his *royaumeur* ancestor. Both were close to the pioneers of the New World; the father of one, the grandfather of the other lived on virgin soil. The one lived among, loved, and influenced great numbers of men. The other in youth was forced to seek opportunity in the wilderness, near the land of his forefather. Good health never failed the one and he died at seventy from a young man's disease. Ill health dogged relentlessly the steps of the other and his arch enemy claimed him after a struggle of over forty years at sixty-six.

Both were deeply interested in the problems of tuberculosis. Osler lived among the crowd and emphasized prevention. Trudeau dwelt in the wilderness with the individual, and spent day and night longing for the cure. Trudeau founded for the cure of the individual the first sanatorium in America. Osler was instrumental in bringing about the formation of the National Tuberculosis Association to carry the fight of prevention to the masses. Sociological prevention activated Osler; search for the Holy Grail of cure fascinated Trudeau.

Trudeau thought in laboratory terms; Osler worked with laboratory exactness in clinical medicine. Both were deeply interested in but neither wrote on the early diagnosis of pulmonary tuberculosis. Trudeau searched for the early stage of the common proliferative type to arrest it; Osler was beguiled by the rare exudative form. Trudeau contributed much to scientific laboratory work in tuberculosis; Osler chiefly to the more general problems. Osler's work in tuberculosis influenced and stimulated many while he lived, including Trudeau. Trudeau's work today has become a tradition and still influences thousands.

The true estimate of the worth of any scientific worker, of his influence upon and good to the world, depends directly upon the number of workers to whom he passes on the torch of scientific investigation and in whom he instils the love of mankind. The work of Osler and Trudeau will be superseded, but the spirit they bequeathed to the following generation will eventually invade the uttermost parts of the earth.—L. B.

BONE TUBERCULOSIS

IT is reported that in Czecho-Slovakia tuberculosis of bones and joints has increased since the war, while the pulmonary form has sunk to prewar level. In America both surgical and pulmonary forms of the disease are greatly reduced. While in Wisconsin no very satisfactory and incontrovertible statistics are available, it is the opinion of the orthopedic surgeons that there has been a very marked decrease in the amount of bone and joint tuberculosis.

A visit to Perrysburg, New York, which serves Buffalo, primarily, and to Glen Lake, Minneapolis, Minnesota, would give one the impression that there must be far more adult bone and joint tuberculosis in those localities than our Wisconsin sanatoria disclose.

It is doubtful, however, if impressions are to be relied upon. In the Minneapolis and Buffalo institutions, there exists a remarkable interest and enthusiasm in respect to the effectiveness of heliotherapy in this disorder. This has undoubtedly led to the bringing of large numbers of formerly obscure cases to attention and thus under treatment.

We strongly suspect that a comprehensive and thorough-going census and report of the cases of child and adult bone tuberculosis in Wisconsin would prove startling and illuminating. A great service to society and reputable medicine would be conferred if these now neglected or deluded patients were brought under competent medical and surgical care.—H. E. D.

AN OMISSION

Because this issue of the Journal contains an unusually complete account of the program for our 79th Annual Meeting, it has been necessary to omit from this issue The Journal Clinic and Preventive Medicine. The Editorial Board regrets the necessity for this omission and assures the readers that it is but for the single issue.

PASSES WORTHLESS CHECKS

Members of the State Medical Society of Wisconsin are warned to be cautious in cashing or endorsing checks issued by one "Dr. George A. Fox," who in one instance gave his residence as Milwaukee, in another, Racine. Two members have reported to the secretary of the state society that a man giving this as his name induced them to cash his checks, in each case following an extended conversation in which he demonstrated his familiarity with phases of medical practice and physicians in and about Milwaukee. The sheriff of Milwaukee County is said to hold a warrant for his arrest upon the basis of passing one of these worthless checks.

The man is described to us as about forty-seven years of age, weight one hundred forty-five to one hundred fifty, height five feet, seven or eight inches and has a medium dark complexion. He has a slight suggestion of an old scar across his nose and appears to be of Irish descent.

PHARMACY BILL VETOED

Declaring that the Staab Pharmacy Bill relating to the future ownership of drug stores would "perpetuate a corporate monopoly in chain drug store business," Governor John J. Blaine disapproved the measure on June 26th. The bill as presented held that in the future only registered pharmacists might own drug stores. This was amended to except those licensed to practice medicine and surgery. The bill also excepted all present owners from the operation of the proposed new law and provided that where a corporation was the owner of a drug store or drug stores at the present time, such corporation might continue to do business and, if it saw fit, extend its ownership. It was against this latter provision that the Governor voiced his main objection.

The Governor's veto follows:

"TO THE HONORABLE, THE ASSEMBLY:

"I return herewith, without my approval, Bill No. 279, A.

"The sponsors of this measure have referred to it as a model pharmacy bill. A careful reading of its terms leads to the conclusion that a much better title would be 'a bill to create and perpetuate a corporate monopoly in chain drug store business.'

"A superficial impression would be that the measure was intended to insure the ownership and operation of the business of retailing drugs by persons registered as pharmacists or licensed to practice medicine and surgery. This might seem to be a laudable purpose.

"On the other hand, the gravest doubt exists whether a measure so designed and so limited in its operation would be constitutional. It must be noted that the prohibitions of the bill are not directed to insuring the compounding of drugs and medicines by persons found qualified so to do, but are directed toward securing ownership of businesses by such a class of individuals. Investigation, it is believed, would confirm the impression that such a measure would be unconstitutional by reason of its denial of property rights.

"The question of constitutionality in this respect, however, may be wholly put aside, because of the essentially vicious character of what the bill in practice would actually accomplish. In plain terms, it denies to every individual and to every partnership, not now owning a pharmacy, the right in the future to acquire such business, unless possessed of the status of a registered pharmacist. The bill then contains the exception that any corporation now conducting such a business may continue to do so.

"Thus far, individuals, corporations and partnerships stand on a parity. Then follows this provision relative to such corporations: they 'may establish and own additional pharmacies in accordance with the provisions of this chapter.'

"In other words, an individual not a registered pharmacist, or a partnership, one of whose members is not a registered pharmacist, may continue to conduct the business which they now own, but may set up no other businesses, and in the future no person and no partnership so constituted may enter the business, but any corporation which, in the nature of things, cannot be a registered pharmacist, which now owns one drug store, may, so far as the provisions of this act are concerned, continue the operation of that drug store and acquire all the other drug stores in the state of Wisconsin.

"This provision seems so plainly unconstitutional, as in violation of the equal rights clause, as to require no extended comment.

"But regardless of its technical constitutionality, it so plainly promotes monopoly control of the drug store business as to call for condemnation.

"For these reasons approval of the measure is withheld.

Respectfully submitted,

JOHN J. BLAINE,

Governor."

Dated June 26, 1925.

AMERICAN BOARD OF OTOLARYNGOLOGY

An examination was held by the American Board of Otolaryngology on May 26, 1925, at the Medico-Chirurgical Hospital, Philadelphia, with the following result:

Passed	137
Failed	20
—	
Total Examined	157

The next examination will be held at the University of Illinois School of Medicine on October 19, 1925. Applications may be secured from the Secretary, Dr. H. W. Loeb, 1402 South Grand Boulevard, St. Louis, Mo.

THE STATE MEDICAL SOCIETY OF WISCONSIN

ORGANIZED 1841

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Wood	J. C. Hayward, Marshfield	V. A. Mason, Marshfield

SOCIETY PROCEEDINGS

CHIPPEWA

Members of the Chippewa County Medical Society had a most enjoyable meeting at Hotel Northern, Chippewa Falls, on Friday evening, July 24th. Following the dinner Dr. J. Gurney Taylor, Milwaukee, presented the subject of "Nutritional Disturbances in the Breast-fed Infant." Mr. J. G. Crownhart, secretary of the State Society, outlined the work of the society and told in some detail of the medical legislation proposed and enacted at the last session. A round table discussion was had following the papers with adjournment at 10:15—C. A. C.

CLARK

Members of the Clark County Medical Society held their midsummer meeting at the Clark County Psychopathic Hospital at Owen on the afternoon and evening of July 8th. The scientific program opened at 3:00 p. m. with a paper by Dr. H. H. Christofferson, Colby, superintendent of the hospital, who presented a brief history of the hospital and its work. Dr. Christofferson touched especially on the subject of epilepsy. Following Dr. Christofferson's paper, various types of cases were presented with their case histories. A general discussion followed this presentation.

At five Dr. A. L. Beier, superintendent of the Wisconsin Colony and Training School at Chippewa Falls, presented a paper relating to the history of the training of the mental defectives, relating especially to the history of such work in Wisconsin. Dr. Beier illustrated the present day care given to the mentally defective by telling of the work accomplished at the Chippewa Falls School. Supt. Duncan of the Clark County Hospital gave a brief statement of the care of the insane at his institution. The members made an inspection of the institution before supper commending Supt. Duncan for the thoughtful care he was giving his charges.

Following the inspection trip, a banquet was served at the institution. After the banquet Mr. J. G. Crownhart, secretary of the State Society, told of the legislative work at the last session in the interest of public health and opened a general discussion on the subject of county society problems. The meeting adjourned at 8:30.—F. P. F.

SHAWANO

Members of the Shawano County Medical Society with their wives were the guests of Dr. and Mrs. Adam J. Gates at a summer outing meeting held at Tigerton, Wednesday, July 15th. At a short business meeting preceding the outing, Mr. J. G. Crownhart, executive secretary of the State Society, told of the society's legislative work in the field of public health during the session just closed. A general discussion followed on future programs of the society and it was decided to hold the next meeting in October.

Following the meeting adjournment was taken to the

Dells of the Embarrass River near Tigerton. Here a picnic supper was served by Dr. and Mrs. Gates. Practically a full attendance of the society was had and the thanks of the members were extended Dr. and Mrs. Gates for a most enjoyable day.—R. C.

TREMPEALEAU-JACKSON-BUFFALO

The Trempealeau-Jackson-Buffalo Medical Society held their June meeting on the 25th at Galesville. Dr. Frederick J. Gaenslen of Milwaukee held a clinic and gave an interesting and instructive address on the subject "Static Disorders with Special Reference to Flat Foot and Back Strain." The meeting was well attended.—R. L. M.

WAUKESHA

Dr. H. G. B. Nixon, Hartland, spoke before the members of the Waukesha County Medical Society on Wednesday, July 5th. He gave a brief outline of his 20,000 mile trip and his visits to the hospitals and clinics of the Mediterranean.—S. B. A.

WAUPACA

The members of the Waupaca County Medical Society met at Weyauwega on June 25th. A very instructive paper was presented by Dr. J. F. Schneider of Oshkosh on "Seminal Vesiculitis," upon which a lively discussion followed. The secretary reported a 100 per cent membership for the Waupaca Society.—A. M. C.

UNIVERSITY OF WISCONSIN MEDICAL SOCIETY

The student members of the University of Wisconsin Medical Society presented an excellent program at Madison on Thursday, May 28th. The reading of research papers by the students opened the meeting at 2:00 p. m. in Science Hall: George O. Berg, "Studies on Traumatic Muscle Injuries (Charlie Horses)," Histology and Neurology; Alan A. Boyden, "The Precipitin Reaction in the Study of Biological Problems," Zoology; V. E. Englemann and N. C. Henderson, "Time of Passage Through the Alimentary Canal," Physiology; Grace A. Goldsmith and Leonore S. Luenzmann, "The Effect of Fatigue on Auditory Acuity," Physiology; Lieut. Harry A. Kuhn, "Sodium Thiosulfate in Arsenic and Mercury Poisoning," Pharmacology; Chester M. Kurtz, "The Action of Lactic Acid and Urea in Dilating Blood Vessels," Physiological Chemistry; William H. Lipman, "The Nerve Supply of Veins," Anatomy; William H. Oatway and Gorton Ritchie, "Intestinal Obstruction in Rabbits," Pathology; and Clinton B. Strickler, "A Quantitative Study of Hypnotic Amnesia," Psychology.

Student research demonstrations at the physiology laboratory: W. B. Bloemendahl and H. Vanderkamp, "Effect of Experimental Exhaustion on Missl Bodies," Histology and Neurology; Otto S. Blum, "A New Reagent for Acetone Determinations," Physiological Chemistry; Genevieve R. Brown and Marguerite A. Field, (a) "On Methods of Testing the Strength of Abdominal Muscles," (b) "Strength Tests in Children,"

Physiology; Chas. F. Burke and Most K. Rosenbaum, "Cross Sections of the New Born," Anatomy; Frances A. Hellebrandt and Carita Robertson, "Effect of Loss of Sleep on Physical Efficiency," Physiology; Ralph Jones, "Modern Medical Caricature," History and Medicine; I. Knudson, "Leucocytic Reactions to Arsenical Drugs," Chemotherapy; Wendell H. Marsden and Chester A. Perrodin, "The Anatomy of Club-Foot," Anatomy; John T. Morrison, "Dog with Lumbar Sympathetics Removed on the Right Side," Physiology; Jeanette Munro and J. Supernaw, "Effect of Experimental Exhaustion on Thyroid and Adrenal," Histology and Neurology; Dorothy E. Nelson, "Use of Field Culture in Determining Toxin Production of Suspected B. Diphtheriac," Bacteriology; Mary O'Malley, Clara C. Rood, and Agnes L. Zeimet, "Studies on the Bacteriophage Phenomenon," Bacteriology; Helen Parker and Mabel E. Rugen, "Pignet's Index," Physiology; Helen E. Pratt, "A Critical Study of the Normal Resistance of Red Blood Cells to Hypotonic Saline Solutions, With Clinical Observations," Clinical Laboratory Diagnosis; Thomas Winston, "Serological Studies of Rabbits Suffering Trypanosomiasis," Chemotherapy.

Sigma Sigma offered prizes for the three best papers or demonstrations. They were awarded as follows: First Prize—between Messrs. Kurtz, Bloemendahl and Vanderkamp; Second Prize—between Messrs. Englemann, Henderson and Lipman; Third Prize—Mr. Berg.

NEWS ITEMS AND PERSONALS

The many Wisconsin friends of Dr. Dean Lewis, Chicago, will be interested to know that he has just accepted an offer from Johns Hopkins to become chief of the surgical department. Dr. Lewis resigned from Rush a short time ago to accept a similar position at Northwestern.

A regular four-year medical course, leading to the degree of doctor of medicine has been established at the University of Wisconsin. Final arrangements to complete the work of the third and fourth years of the university medical course, as planned by the faculty, were authorized by the board of regents recently. The third year of medical work will be started this fall and the fourth year will begin the following year.

The third year medical work embraces part medical and part surgical study. The fourth year of work contemplates a detailed study of the third year but includes X-ray technique, sanitation and public health. Completion of the Wisconsin state hospital at Madison makes possible the development of the extended courses and furnishes facilities for practice and intern work in every kind of surgical or medical case.

Dr. Joshua H. Armstrong, after an absence of several years from New Richmond, has returned to the city and formed a partnership with Dr. F. S. Wade.

Dr. Armstrong was graduated from the New Richmond high school in 1915, from Hamline University in 1920, and from the medical college of Marquette University, Milwaukee, in 1924, and was licensed by the state board of medical examiners in June, 1924.

Dr. and Mrs. Arthur Teitgen and sons, Theodore and Chester, of Manitowoc are on a motor trip to Yellowstone Park, where they plan to spend three or four weeks. They will meet Dr. August Teitgen and family at Yellowstone and accompany them to their home at Yakima, Wash., and on their return trip plan to stop at Salt Lake City and other points of interest.

Dr. Ernst Pribram, a pathologist of the University of Vienna and onetime associate worker with Drs. Ehrlich and Wassermann, will come to Milwaukee to take charge of the pathologic department of Mt. Sinai hospital, according to announcement made at the annual meeting of Mt. Sinai hospital association recently. Dr. Pribram is scheduled to arrive in Milwaukee some time in September.

Reports of officers showed that during the year just closing, the hospital treated 2,957 non-Jewish patients and 1,067 Jewish. The reports also showed that the free cases together with partial pay cases aggregated a total of 60 per cent that did not pay actual cost. In its new dispensary venture, opened January 16th this year, the hospital has treated 4,241 cases.

Thieves, evidently dope fiends, broke into the offices of Dr. W. D. Harvie, Fond du Lac, recently and took a quantity of cocaine and morphine. Only the medical cabinets were touched. A small amount of money in the doctor's desk was undisturbed.

The residence of Dr. G. N. Pratt, Neenah, was damaged by fire, a short time ago, to the extent of \$10,000. The origin of the fire is unknown. Dr. Pratt was alone in the house at the time of the fire, his family being out of the city and the maids having left preparatory to turning the house over to decorators the following week.

Dr. E. T. Ridgway, Elkhorn, was recently appointed county physician of Walworth County to succeed the late Dr. E. Kinne.

Dr. S. G. Schwartz is now established in his new position at the Marshfield Clinic as supervisor of the electrotherapeutic department. Preparatory to his arrival at Marshfield, Dr. Schwartz disposed of his practice at Humbird and then took a several months' course in his work at Minneapolis and Chicago.

Dr. I. F. Clark and family have removed to Eau Galle where the doctor will establish his practice in the future. They have resided at Durand for the past year.

Dr. Joseph Lettenberger of Milwaukee has left for Europe where he will visit various medical centers and do post-graduate work for the next nine months.

Dr. J. P. Canavan of Winneconne now occupies the offices in the Courtney building, Neenah, which were formerly occupied by Dr. C. C. Del Marcelle, who was severely injured in an automobile accident several months ago.

Dr. Frederick Eigenberger, Sheboygan, who has been experimenting for a serum to cure snakebites, is slowly

recovering from poison after being struck by a rattlesnake on his farm southeast of the city. Dr. Eigenberger has been engaged in scientific research to determine the effects of snakebites and cures for them for several years.

Dr. Edwin P. Bickler, Milwaukee, who has been an interne in St. Mary's hospital since receiving his degree in medicine at Marquette University in June, 1924, has been chosen as camp physician at Camp Flambeau, near Eagle River, for the summer months. Before entering active practice Dr. Bickler plans to spend the next school year in post-graduate work in internal medicine at the University of Pennsylvania.

Dr. P. M. Currer was recently elected president of the new advisory board of Milwaukee Emergency hospital. Other members of the board are Drs. O. R. Lillie, Stephen Cahanna, Eleanore Cushing-Lippitt and L. C. Tisdale, all of Milwaukee.

Dr. S. W. Doolittle, Lancaster, who has practiced in the state of Wisconsin for many years, has recently announced his retirement from active practice. Dr. Doolittle has no future plans but to take a good rest and build up his health.

Their craving for "dope" led two narcotic addicts to sign the name, "Dr. J. C. Harper," to prescriptions authorizing druggists to sell them the stimulant they wished. No "Dr. J. C. Harper" practices medicine at Madison. According to reports from the offices of Drs. C. A. and C. S. Harper, Madison, the names of those physicians have not been forged to the prescriptions.

Dr. F. S. Wiley, Fond du Lac, entertained a number of physicians from various parts of the state recently at St. Agnes' hospital. The new addition to the hospital was inspected by the visitors.

Dr. C. J. Nedry, Chippewa Falls, is taking a leave of absence from his practice for a period of several months. He will spend considerable time doing post-graduate work in the large eye, ear, nose and throat clinics of Chicago, New York and abroad. During his absence Dr. Merton Field of Minnesota has charge of the doctor's practice.

Dr. Charles Zimmermann, Milwaukee, returned recently from a four months' trip to Europe.

An Indian medicine woman, about to dispense herbs, in and about the city of Fond du Lac, has been barred as a result of a ruling of Attorney General Herman Ekern. The attorney general ruled that inasmuch as it was necessary to be licensed to dispose of drugs, the sale of herbs would be unlawful. He also held that a woman who represents herself as able to tell people afflicted with rheumatism and other ailments the herbs that would assist them, and sells such herbs, violates the state medical law.

Another recent ruling of Attorney General Ekern states that persons who are financially unable to provide for proper treatment for a deformity or ailment, al-

though they own some property, may be admitted to the Wisconsin General hospital at Madison as public patients.

Dr. L. R. Fowzer, formerly of Stevens Point, is on his way to Liberia, Africa, to become a medical missionary. He recently gave up his practice in Oshkosh, where he had resided for a year and half after leaving Stevens Point. Dr. Fowzer will first go to London for a six weeks' course of study in surgery and then sail directly for Liberia, where, with two other doctors, he will be in charge of a hospital.

Dr. Corydon G. Dwight and Dr. Clarence K. Schubert have recently announced the opening of the Dwight and Schubert clinic on the second floor of the First Central building, Madison. Practice in the new clinic will be confined exclusively to the eye, ear, nose and throat.

Dr. Corydon G. Dwight, who has recently spent several months of rest and study, was formerly associated with the Dwight and Davis clinic. Dr. Clarence K. Schubert, formerly associated with the Jackson clinic, has spent the past year in Europe.

Dr. E. L. Miloslavich, professor of pathology at Marquette University, Milwaukee, addressed the mid-summer meeting of the Austin-Flint Cedar Valley Medical Society at New Hampton, Iowa, July 8th, on the subject of "Post Mortems from the Standpoint of the General Practitioner." On June 24th he presented the paper "The Soul of Scientific Hospital Service" at the Tenth Annual Meeting of the Catholic Hospital Association at Spring Bank, Okauchee, Wis.

The Merrill Clinic, Merrill, formerly under the direction of Dr. C. C. Walsh, deceased, has been reopened by Dr. H. R. Fehland. Associated with him are Doctors F. H. Powers and G. G. Mueller. Dr. Powers was formerly of Beaver Dam where he specialized in surgery. Dr. Mueller has been associated with the City and County hospital of St. Paul, Minn. Dr. Powers will be in charge until such time as Dr. Fehland makes the necessary arrangements to leave Minneapolis where he is at present chief resident surgeon at the Minneapolis General hospital.

At the legislative session recently adjourned the state senate adopted, upon motion by Senator Lange of Eau Claire, the following resolution on the services of Dr.

E. S. Hayes, Eau Claire:

Jt. Res. No. 76, S.,

Expressing appreciation of the services of Dr. E. S. Hayes as a member of the State Board of Health.

WHEREAS, Dr. E. S. Hayes has recently resigned from the State Board of Health, after having served continuously as a member thereof for more than twenty years; and

WHEREAS, Dr. Hayes, regardless of his many private duties, has been in constant attendance at the meetings of the board of health and there has contributed his valuable counsel in framing the beneficent public health policies of the state; and

WHEREAS, Dr. Hayes well deserves state-wide commendation for his many years of faithful and efficient public service; now, therefore, be it

Resolved by the senate, the assembly concurring, That this legislature hereby expresses its sincere appreciation to Dr. E. S. Hayes for his many years of valuable public service as a member of the state board of health. And be it further

Resolved, That an engrossed copy of this resolution be duly transmitted to Dr. Hayes.

While the Tri-State Clinic Tour has been completed, several Wisconsin physicians are extending their trip abroad. During the past month the daily press has noted the return of the following: Dr. and Mrs. W. T. Lindsay, Dr. and Mrs. T. W. Tormey, Dr. and Mrs. R. T. Cooksey, Madison; Dr. and Mrs. G. T. Boyd, Fond du Lac; Dr. A. J. Batty, Portage; Dr. J. A. Mudroch, Columbus; Dr. Chester M. Echols, Milwaukee.

CORRESPONDENCE

New York City, July 13, 1925.

Mr. J. G. Crownhart,
State Medical Society of Wisconsin,
558 Jefferson Street, Milwaukee, Wis.

Dear Sir:

It gave us great pleasure to read your clipping from the Wisconsin Medical Journal. We are always glad to know that our efforts are appreciated.

We shall be glad to add all Wisconsin physicians or health workers who send in their names to us.

Very truly yours,

LOUIS I. DUBLIN,
Statistician.

MARRIAGES

Dr. Richard Leslie Bower of Madison and Miss Alice Louise Gall were united in marriage at St. Paul, Minn., on June 27th.

The marriage of Dr. Joseph Paul Graves, Kenosha, and Miss Jeanette Valeria Schreiner took place on the 22nd of June at New Holstein.

DEATHS

Dr. Charles Chase Walsh, Merrill, died on July 6th at St. Mary's Hospital, Wausau, from blood poisoning which started from a slight injury to his left thumb. He was born at Amesville, Ohio, June 23, 1863, and was graduated from the College of Medicine of the University of Iowa in 1889, after which time he practiced at Marinette for two years and at Merrill since 1890. He is survived by his wife, two daughters, a sister and a brother.

Dr. Walsh was a member of the Lincoln County Medical Society, the State Medical Society of Wisconsin and the American Medical Association. Several years ago the doctor was elected secretary of the Lincoln County Society and at the time of his death was president of the society. Dr. Walsh also served as president of the Ninth Councilor District Medical Society three years ago.

Dr. Edward A. Taylor, Racine, died on July 3rd after an illness of nearly a year. He was born in Melbourne, Australia, June 24, 1864, and was graduated from Rush Medical College in 1890. The doctor practiced medicine at Baraboo and Algoma, coming to Racine in 1898. Surviving him are his wife and one sister.

Dr. Gertrude Gail Wellington, Balsam Lake, died at her home at Balsam Lake on July 3rd after a short illness, although she had been in failing health for several months. She was born in Decorah, Iowa, December 12, 1873, and was graduated from the New York Medical College and Hospital for Women in 1887. Dr. Wellington established her practice at Balsam Lake early in the year 1900.

Dr. William T. Lochemes, Milwaukee, died on his sixty-second birthday, July 17th, after an illness of six months. Dr. Lochemes had suffered a complete nervous breakdown as the result of overwork. A three months' trip to Europe last year, taken in hopes of recovering his health, proved ineffective. For many years, Dr. Lochemes served as president of the board of trustees of the Emergency Hospital, and for the last thirty years, was an examining physician on the United States pension board. He was a graduate of the Milwaukee College of Physicians and Surgeons in 1896. Surviving him are three brothers and four sisters.

Dr. Lochemes was a member of the Milwaukee County Medical Society, the State Medical Society of Wisconsin and the American Medical Association.

Dr. D. E. Lane passed away at Alhambra, Calif., the early part of July. He was born in 1852 and obtained his medical education at the General Medical College, Chicago, from which he was graduated in 1878. Dr. Lane practiced medicine at Racine a number of years ago.

Dr. Albert John Ochsner, of Chicago, died July 25th. Death was due to angina pectoris. Dr. Ochsner, who was 67 years old, was the author of numerous surgical treatises and textbooks and a contributor to the medical press. He was born in Baraboo, Wisconsin, and was graduated from the University of Wisconsin and Rush Medical College, later studying in the Universities of Vienna and Berlin. Since 1896 he has been chief surgeon of the Augustana hospital and St. Mary's hospital at Chicago.

Dr. Ochsner was a former president of the American College of Surgeons and was for many years professor of surgery in the University of Illinois. Before his death he requested that he be buried with his parents at Honey Creek, Wis. He is survived by his wife, a son and a daughter.

Dr. J. F. Denham, Boyceville, a resident of Dunn County for 64 years, died July 19th at the Abbott hospital, Minneapolis. Dr. Denham was graduated from the General Medical College, Chicago, in 1896 and first started practice in Eau Galle. A year later he moved to Downsville, where he practiced for twenty-seven years, moving to Boyceville in 1917. Surviving him are his wife and five children.

Dr. Henry Gathmann, Milwaukee, passed away on July 21st. Dr. Gathmann was born in 1864 and was graduated from the University of Illinois College of Medicine in 1899. He was an associate of Dr. J. J. Seelman, Milwaukee, for a number of years. He is survived by his wife, a son and a daughter.

Dr. Gathmann was a member of the Milwaukee County Medical Society, the State Medical Society of Wisconsin and the American Medical Association.

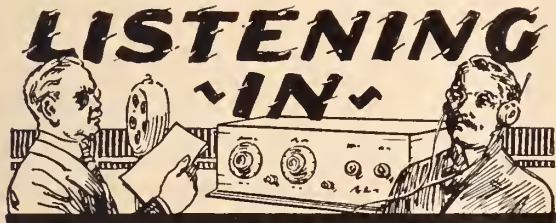
SOCIETY RECORDS

NEW MEMBERS

Lowe, John W., Taylor.
 Bauer, W. W., Racine.
 Hill, B. Spaulding, Kenosha.
 Maxwell, W. W., 1111 W. Johnson St., Madison.
 Lehmann, F. W., Hartford.
 Janney, F. R., Waukesha.
 Juers, R. H., Birnamwood.
 Aves, D. R., Birnamwood.

CHANGES IN ADDRESS

Lehnkering, C. F., Long Beach, Calif., to Darlington.
 Bennett, W. C., Denver, Colo., to Box 232, Ft. Lyon, Colo.
 Museus, H. B., Eau Claire to Beach, N. D.
 Canavan, J. P., Winneconne, to Courtney Bldg., Neenah.
 Blom, Julius, Menomonie, to Woodville.



We Bow

With this issue your full time secretary-managing editor inaugurates this column, believing that its contents will be of interest and of value to the readers. There is a steady increase in the correspondence between the membership of the society at large and the full time officer. Although much of this correspondence is purely personal in nature, there remains that which pertains to general questions. The writer believes that in many instances the information furnished the one will be of interest to all—hence this column.

Fee is Allowed

A member from southern Wisconsin, upon order of the county judge, examined a patient to ascertain whether the conditions warranted sending the patient to the State of Wisconsin General Hospital at Madison. The member inquires if any fee may be assessed against the county and if so, how much. He is informed that the fee is \$5.00, and actual and necessary expenses.

To Avoid Delay

Mr. Ray J. Nye, federal prohibition director for Wisconsin, calls attention to the fact that physicians who desire to renew their federal permits under the Prohibition Enforcement Act, should file such application for renewal before August 31st. While the new permits will not be issued until late in December, it is essential that these early applications be made if delay is to be avoided.

Four Instead of Two

Effective this fall the State Board of Medical Examiners will hold four meetings a year instead of the minimum of

two as required by law. The additional two meetings will probably be held in October and April and will be for the purpose of acting upon applications for reciprocity and accumulated business of the board. Previously an application for reciprocity coming in after the late June examinations, had to be held pending until the January meeting.

Wisconsin Leads

Our members will be interested in the following statement by Dr. J. Norman Henry, president of the Pennsylvania Medical Society. In referring to legislative public health work, Dr. Henry states:

"I am entirely satisfied that the best way, and indeed the only way, to handle this cult matter is by the passing of a One-Board bill * * *."

This Worked Fine

Your secretary recently had the pleasure of attending a meeting of the Clark County Medical Society which was held at the Clark County Asylum. Two points stand out as worthy of attention. In the first place, the meeting was held at a county institution—a splendid idea for one meeting a year. In the second place, the program included not a single speaker who lived farther than fifty miles away. The discussion was full and frank, the topics discussed were apropos, and the meeting was as valuable as it was enjoyable.

Suggestions Help

In a large society the members are prone to have the feeling that what they as individuals may say counts for little. We hope this will never be the case in Wisconsin.

A Milwaukee member suggested that in listing changes of address, instead of placing a dash between the old and new address, we insert the word "to" to make plain which was the new address. The suggestion was adopted and is effective with this issue.

Some time ago a member suggested that members who attended the Annual Meeting, but not as delegates, really had no opportunity to express their views and opinions on socio-medical questions. The socio-medical smoker, inaugurated at Green Bay last year, was the result. It will be continued and we believe that the Milwaukee smoker will be even more valuable and interesting to the members than was the first one.

We can use more suggestions like those.

Important If True

Sometime over a year ago this Journal contained an account of how a newspaper in a neighboring state twisted a story sent them through the channels of the medical society of that state so that it read that the use of "pollen serums and chiropractic treatment" was recommended in the treatment of hay fever. At that time we had a good laugh at the expense of another society.

Now your secretary has the laugh turned on him. In reporting his presence at a meeting of a county society in northern Wisconsin, the weekly newspaper declared that "George Crownbart, secretary of the State Medical Society was present and delivered an inspiring address on *Christian Science Healing*." Further, the paper declared that "following the delivering of the talk the members in attendance discussed the topic thoroughly."

There is no doubt in your secretary's mind but what the members would have discussed the topic "thoroughly" had such a talk been given.

LOBBY ACCOUNT IS THREE THOUSAND

Statements of all expenses in connection with advocating or opposing legislation at the session of the Wisconsin legislature just adjourned, have now been filed with the Secretary of State pursuant to statute. These statements show that the State Medical Society of Wisconsin made a total expenditure of \$1,877.62. The statement filed for the Wisconsin Chiropractic Association has a total of \$3,156.29.

Essential Features of Volstead Act as Applicable to Physicians Explained

BY RAY J. NYE,

Federal Prohibition Director for Wisconsin, Gross Building, Milwaukee

This article has been written at the request of the Journal so that Wisconsin physicians might avoid misunderstandings necessitating frequent correspondence. The Journal desires to express its appreciation to Mr. Nye for his cordial cooperation.—Editor's Note.

Any physician licensed by the State Board of Medical Examiners to practice medicine in the State of Wisconsin, and actively engaged in the medical profession, may, upon application, receive a permit from the federal government authorizing him to prescribe intoxicating liquors for medicinal purposes, and also, to procure a limited amount of whiskey for office emergency cases, and a limited amount of alcohol to be used in sterilizing his instruments or in compounding medicines for his patients.

PROCEDURE TO OBTAIN BASIC PERMIT

A physician who desires to obtain a basic permit to prescribe or to procure intoxicating liquors for office use will, upon request made to the Federal Prohibition Director, Milwaukee, Wisconsin, be furnished with the regular application Form 1404, which reads as follows:

"The undersigned hereby makes application for a permit to:

"1. Prescribe intoxicating liquors for medicinal purposes to persons under his personal medical treatment, supervision and attendance in accordance with the United States Laws and Regulations.

"2. Procure six quarts of liquor during one calendar year—such liquor to be administered to patients for medicinal purposes only, in cases of emergency.

"3. Obtain alcohol to be used in compounding medicines; alcohol also to be used for sterilizing instruments and other than internal purposes. Quantity for these purposes not to exceed 5 wine gallons during a calendar year."

This application must be executed in triplicate, according to directions which are given the physician in a letter which is enclosed with the application blanks. The subject matter of the application should be read carefully, and a checkmark should be placed at each paragraph which describes

a privilege the physician wishes to obtain. If the first paragraph only is checked, the permit will authorize the physician to prescribe only. If the physician should later in the year wish to obtain whiskey and alcohol for office use, he may apply for an amendment to his permit. However, the additional work and delay of having his permit amended may be avoided by the checkmarking of all three paragraphs at the time of making application, the actual purchase of the liquor to be made at any time during the year as the physician finds it necessary.

DURATION OF PERMIT

Permits issued before September 1st of any year, become effective at once and expire on December 31st of that year. Permits issued after September 1st, become effective at once and remain in force until December 31st of the next year.

RENEWALS OF PERMITS DUE NOW

In July of each year, a set of application blanks is mailed to each physician holding a permit at that time, in order that he may make application for the renewal of his permit. These renewal applications should be filed with the Federal Prohibition Director as soon as possible, and must be on file before August 31st in order that the new permit may be issued before the old one has expired. The renewal permits are forwarded to permittees the last week in December. A physician who does not receive his permit before the beginning of the new year, loses his permit privileges until he is in receipt of the new permit.

USE OF PRESCRIPTION BOOK

When a physician receives his first permit to prescribe, he, at the same time, receives a prescription book containing one hundred prescriptions printed by the government on special water-marked paper. If upon examination the physician finds his patient to be suffering from some specific ailment for which, in his opinion, intoxicating liquor is the best remedy, (the prescribing of liquor except in such cases is a violation of law), he will write on the prescription with pen or indelible pencil, his federal permit number, the actual date of issuance of prescription, the full name and address of the patient, the name and

POINTS TO REMEMBER

1. You must return your federal permit for amendment if you change your office address.
2. The physician issuing the prescription must *personally* fill in all data that is required. It is not permissible for an assistant to fill in a blank and then have the physician sign it.
3. A full ten days must elapse between a first and each subsequent prescription for the same individual.
4. A physician may prescribe up to the following limits:
 - A. Alcohol—one-half pint.
 - B. Whiskey, gin or rum—one pint.
 - C. Wine—one quart.
5. You must first obtain your federal permit and, second, after receiving your federal permit you must secure the corresponding state permits.
6. The new state single permit law (see Journal, July, page 109) does not become operative until January 1, 1926. In the meantime the three separate state permits are still in effect.
7. Having indicated on a prescription blank the name of a druggist where the prescription is to be filled, the patient receiving the prescription is not permitted to go elsewhere. If the druggist named is unable to fill the prescription he must endorse it over to a second druggist and the original druggist must enter in his record book the fact that he did so endorse a prescription of that number, entering the name of the druggist to whom the patient was sent.

address of the druggist upon whom drawn, his own full name and address and the amount and kind of liquor prescribed. The amount of liquor must not exceed the amount actually needed in the treatment of the specific ailment for which the prescription is written. The regulations provide also—"That only spiritous and vinuous liquor may be prescribed for medicinal purposes, and all permits to prescribe and prescriptions for any other liquor shall be void. No physician shall prescribe nor shall any person sell or furnish on any prescription, any vinuous liquor that contains more than 24 per centum of alcohol by volume, nor shall anyone prescribe or sell or furnish on any prescription more than one-fourth of one gallon of vinuous liquor, or any such vinuous or spirituous liquor that contains separately or in the aggregate more than one-half pint of alcohol, for use by any person within any period of ten days."

Each prescription is attached to a stub, and the information entered on the stub furnishes a complete record of the use made of the prescription. A prescription book must last at least 90 days and, unless recalled by the director, the prescriptions in any book may be used during a period of a year or two or longer. When all prescriptions in a

book have been issued, the book of stubs must be returned to the director's office to be examined and placed on file. If the stubs show a legitimate use of the blanks, the director will issue and forward the physician a new prescription book.

RECORD BOOKS

Every physician who issues prescriptions for intoxicating liquor, must keep a record of each prescription issued in a special record book furnished upon request by the director. Full instructions as to the keeping of these records are printed on the first page of the book.

PROCEDURE FOR OBTAINING WHISKEY AND ALCOHOL

With every basic permit to procure whiskey and alcohol there is forwarded a blank Form 1410 to be used by the physician when he is in need of liquor for office use. Complete instructions for using it are printed on the back of the form. The form when executed, is returned to the office of the prohibition director. If approved by him, the vendee's copy of the permit to purchase is forwarded to the physician, who in turn forwards it to the druggist of whom he wishes to make the purchase. The druggist having received from the director the proper permit to sell this amount of liquor to this particular physician, fills the order as soon as he receives the vendee's copy from the physician.

FEES

The federal government charges no fee for permits issued under the National Prohibition Act. However, every federal permit is subject to the further restrictions of the laws of the state, and the State of Wisconsin requires every physician who prescribes intoxicating liquors to obtain a state permit to prescribe, and every physician who purchases whiskey for office use to obtain a state permit to use whiskey. The fee for each state permit is \$10.00. A third permit is required to secure alcohol. The new state single permit law described in this Journal of July, 1925, page 109, is not operative until January 1, 1926. All correspondence in regard to state permits must be addressed to the State Prohibition Commissioner, Madison, Wisconsin.

NEW MEDICAL LAWS PUBLISHED

The State Medical Society is publishing a codification to embody our present statutes covering the field of "Treating the Sick." This will be published in an early issue of the Journal. In the mean time any desiring a copy of this codification may secure it by addressing the Secretary, 558 Jefferson Street, Milwaukee.

The Wisconsin Legislative Session of 1925

How the Legislative Record Looks from a Medical and Health Standpoint

BY MR. L. W. BRIDGMAN

State Board of Health

The smoke of legislative conflict having subsided for another biennium, it is opportune to pursue a quest for benefits. In the enactment of the basic science law, the recent legislature is to be credited with an outstanding advance in medical education and preventive medicine, as was reported more fully in the May, June and July issues of this Journal. The session did not, however, deal so effectively with other important problems which were brought to its attention and by the aid of which it was hoped to cope better with conditions ever recurring in the improvement of the public health and social conditions.

THESE MEASURES BECAME LAW

Physician's Permit Fee. After January 1, 1926, by the terms of a law fostered by the Wisconsin State Medical Society, physicians may secure all privileges accorded them under the state prohibition enforcement law in a single permit and by the payment of a single fee of \$10. The measure abolishes the multiple permit and multiple fees. The same privileges are accorded to druggists. The essence of the new law is contained in the following clause:

"A physician's permit shall authorize and permit the person to whom issued, subject to this chapter and rules and regulations prescribed by the (prohibition) commissioner: (a) To prescribe liquor; (b) to procure liquor to be administered to patients for medicinal purposes in cases of emergency; (c) to obtain liquor to be used in compounding medicines; (d) to procure alcohol to be used in sterilizing instruments."

An assembly amendment to raise the fee to \$15 was defeated 50-31.

Disposition of Corpses. By Chapter 65, a new section is added to the statutes to provide as follows: "No public official, employe, or officer of any institution, physician or surgeon shall send, or cause to be sent, to any undertaker or embalmer the corpse of any deceased person without having first made due inquiry as to the desires of the next of kin or any person who may be chargeable with the funeral expenses of such deceased person; and if any such kin or person be found, his authority or direction shall be received as to the disposal of such corpse."

Embalmers' Qualifications. The legislature enacted an additional clause to the law governing embalmers' qualifications for license. As an alternative to the requirement for an eighth grade education and at least two years' practical experience in embalming under a licensed embalmer, the law as amended permits an applicant for license to submit proof of graduation from a school of embalming which requires as a prerequisite to graduation the completion of a course of study of not less than eight weeks, and which has been approved by the State Board of Health.

State Health Appropriations. The biennial appropriations for the State Board of Health were made as follows: For the prevention of ophthalmia neonatorum and the preparation and distribution of nitrate of silver therefor, \$1,500 annually; for the prevention and control of venereal diseases, \$36,370 annually, to be diminished by the amounts received for the same purposes from the federal government; for the bureau of sanitary engineering, \$14,000 annually; for the bureau of child welfare and public health nursing, \$23,000 annually. These amounts are in addition to the continuing appropriations for general administration of the board.

Change in Board Meetings. The legislature approved a change in the date of the regular meeting of the State Board of Health, stipulating that meetings shall be held in January and July instead of January and June.

Health Measures for Indians. There was introduced late in the session a bill sponsored by the State Board of Health to appropriate \$8,000 annually "for public health work and the investigation and prevention of disease with special reference to the Indian population of this state." This bill found its warrant in the prevalence of trachoma, tuberculosis, and other maladies on the reservations in Wisconsin, and was urged by the American Indian Defense society as a duty Wisconsin owes to its newly made citizens—the remnants of the Redmen. The bill passed both houses by nearly unanimous vote and was signed by the governor.

Health Publications Charge Authorized. The lawmakers approved the request of the State

Board of Health for the right to charge the actual cost for publications and other material requested by the public in quantities, which cannot, because of prohibitive expense, be issued free of charge. All requests for single copies of publications will continue to be filled without charge.

Sanitary Districts in Towns. Through an enabling act the legislature made possible the creation of sanitary districts in townships by means of which waterworks, sewerage systems and other sanitary plans may be adopted in rural sections. This is particularly to the advantage of summer resorts, which may now provide such necessities without incorporating as a village. On petition of 60 per cent of owners of property not used for agriculture, a town board is required to create a sanitary district, after due hearing on its boundaries, and to be approved by the State Board of Health and the commissioner of agriculture. Three commissioners are to be appointed, to act in the same manner as a village board in the construction and operation of waterworks, sewage disposal and garbage disposal plants. The cost is to be assessed directly against the property benefited, and provision is made for an annual tax not to exceed five mills for the expense of operation.

Location of Slaughterhouses. The problem of nuisances in municipalities drew attention in the effort to amend the law relating to the location of slaughterhouses. The law has for many years prohibited the operation of slaughterhouses, unless under federal inspection, within one-eighth mile of a public highway, dwelling, or business building. This is now amended so that the prohibition does not apply to central or cooperative slaughterhouses in cities having a full-time health officer. Such slaughterhouses shall be open to inspection at all times and must be operated in compliance with all state and local regulations.

Affecting Practice.

1. Basic Science Law previously reported.
2. Chiropody. Future chiropodists must meet raised standards and pass more extensive examinations under a measure fostered by their Wisconsin Association.
3. Optometrists. Future optometrists must also comply with raised standards. The new law increases their professional school requirement from one to two years. It also makes unlawful the use of so-called

self-testing machines for the sale of glasses by non-optical stores.

4. Chiropractic. Previously reported. Exemption of 1915 repealed. Licensure substituted with basic science certificate as prerequisite. May not use title "Doctor" or abbreviations. Annual re-registration required. License can be revoked for causes enumerated previously for physicians.

FOR THESE THE GRAVE

Counsel for Medical Examiners. The assembly defeated a senate bill to abolish the employment of an attorney by the State Board of Medical Examiners to assist in enforcement of laws governing practice.

Admission to Sanatoria. The assembly passed Mrs. Brooks' bill, offered at the request of the Wisconsin Anti-Tuberculosis Association, opening county sanatoria to the admission of any citizen of the state regardless of the length of such residence. The senate non-concurred, thereby defeating the effort.

Medical Jury for the Insane. The senate rejected a bill designed to repeal the right to a jury trial of persons alleged to be insane, and to provide for a jury of three physicians to try the question of sanity. Under this bill the verdict of a majority would be valid, and each juror would receive \$15 per day as compensation.

A verdict of indefinite postponement also was voted for a senate bill proposing to increase the physician's examining fee in insanity cases from \$4 to \$6 per day.

Secrecy of Professional Information. A senate committee bill renewed the effort of long standing in Wisconsin to permit the disclosure of professional information in civil actions by physicians. Its intent was limited, however, to cases where the reputation of the patient would not be involved. The bill met defeat.

Marriage Bar for the Unfit. The marriage laws were sought to be amended in proposals taking various forms. One such measure, by Senator Boldt, included in the classes of persons for whom marriage is prohibited the feeble-minded and persons afflicted with active pulmonary tuberculosis. It was passed by both houses but vetoed by the governor. A senate bill of somewhat similar import was previously defeated. This sought to bar from marriage "any person who shall not have

procured, not more than fifteen days before making application for license to marry, a certificate from a licensed physician showing said person to be free from venereal diseases or tuberculosis."

Sterilization of Defectives. Another measure aimed to place limitations upon the procreation of the unfit sanctioned and created procedure for the sterilization of feeble-minded or insane persons as a condition to parole, with elaborate checks through hearings and the right of appeal in order to afford full legal protection to inmates affected. The bill passed both houses but failed of final enactment through executive veto.

Eugenics Law for Women. Legislation to bring women applicants for marriage licenses under the provisions of the physical examination law failed in both houses after extended and spirited discussion.

County Health Departments. The senate received a proposal to authorize counties to organize a county department of health on the lines of the plan in force in a number of states. It called for the employment of a county health officer and other assistants, the health officer to be selected from an eligible list submitted by the State Board of Health. The bill failed of passage.

Increase in Sanatoria State Aid. An executive veto greeted a bill which passed both houses, providing for an increase of state aid to counties for the treatment of the tuberculous. The existing aid of \$225,000 per year was increased in the bill to an amount depending upon increases in the cost of maintenance, which led the governor to the conclusion that unlimited amounts might be expended with an immediate increase of \$75,000 annually. The absence of a special tax to meet the added expense was further ground for executive objections.

State Aid for Tuberculous. The legislature passed a bill by Senator Keppel fixing \$7 per week per patient as the state's share of aid for the tuberculous in county sanatoria. This bill also was vetoed.

Hospital Tax Exemption. A bill to exempt all hospital property from taxation was killed.

Pharmacy Law Revision. A bill received consideration providing that every pharmacy shall be owned by a registered pharmacist. The measure was much broader than this, however, in that it rewrote the state pharmacy law and the statutes regulating the sale of poisons. It was finally

withdrawn at the request of its sponsor, Senator Harry Sauthoff. A modified substitute assembly bill was vetoed.

Naprapath Legislation. Two proposals to admit naprapaths to practice in Wisconsin were defeated by the Senate, 23-6; 21-5. It was proposed to allow them to treat communicable and contagious disease, sign health and death reports, and to exempt those now in practice (illegally) in this state.

Original Optometry Bill. The original optometry bill, as proposed by the Wisconsin Association, provided that after January 1, 1926, physicians desiring to fit glasses and not previously licensed, must comply with the optometry law. This would require physicians to have education in an optometry school and pass optometry examination. This original bill died when a substitute dropping reference to physicians, was adopted in the assembly.

DR. WARFIELD'S CONCLUDING LETTER

(Continued from Page 137)

and living is very reasonable. Two Americans were working in the clinic, one of whom had been there a year and the other six months. Both were quite enthusiastic about the opportunities, especially in the laboratory.

And now I am on the last leg of my journey, at present in London, a truly wonderful city. As I leave the middle of this month for my own land, I bid good-bye, as a foreign correspondent, to my readers. I have had a most delightful and profitable time. In these letters I have attempted to give sketches, only, of what I have seen and heard. I hope that the letters have fulfilled their purpose. Soon I shall be among you again, a citizen of Wisconsin, when I shall be able to fill in details by personal conversation.

Sincerely,

Louis M. Warfield.

TO CHANGE PERMIT DISTRICTS?

With the rumored change of federal enforcement districts under the Volstead Act, the State Medical Society of Wisconsin has petitioned that no change be made in the permit district. At the present time Wisconsin constitutes one permit district. If a change were made the state would probably be divided and administered from Chicago and St. Paul. The officers of the State Society feel that such a change would work a hardship upon physicians in the state.

Preliminary Arrangements Completed; Assures Annual Meeting Program of Interest to All

SOCIO-MEDICAL SMOKER WILL COMMEMORATE FIFTIETH ANNIVERSARY OF
FIRST LEGISLATIVE PROPOSAL AUTHORIZED BY WISCONSIN SOCIETY

Announcement of the preliminary arrangements for the 79th Annual Meeting at Milwaukee, September 16th-18th, promises a well-rounded program for the study and entertainment of all the members. This meeting will be the 50th anniversary of the first legislative proposal by the Wisconsin society. The socio-medical smoker this year is dedicated to the anniversary and a fitting celebration is promised. In addition to this meeting for the discussion of socio-medical problems, the membership will have an opportunity to attend alumni luncheons of the various colleges; the secretaries and presidents of the county societies and officers of the state society will have a special luncheon given in their honor; arrangements are being made so that privileges for the Milwaukee golf links will be available to all, and the annual banquet and dance will again have the single feature of the president's address.

ON TUESDAY, SEPTEMBER 15th

While the meeting proper does not open until Wednesday, it will be preceded by a meeting of the council at Hotel Pfister at 4:30 p. m. Tuesday, September 15th. The first meeting of the House of Delegates, in many respects its most important, will be held at Hotel Pfister at 7:30 Tuesday evening. The time of all future meetings of the house is designated at this meeting.

ON WEDNESDAY, SEPTEMBER 16th

Scientific sessions will open in Juneau Hall, the Auditorium, on Wednesday morning. The registration booth will again be located in the midst of the exhibits in Kilbourn Hall just opposite the hall in which all scientific sessions will be held. The commercial and scientific exhibit halls and registration booth will be opened at 8:00 o'clock Wednesday morning. The second meeting of the House of Delegates will either be held prior to the opening of the session on Wednesday morning or during the recess Wednesday noon.

The second annual socio-medical smoker, dedicated to the 50th anniversary of the first legislative proposal by this society, will be held in the Fern Room of Hotel Pfister, at 7:30 Wednesday evening. The smoker will be opened by Dr. Otho Fiedler, Sheboygan, president of the State Board

FIFTIETH ANNIVERSARY

In 1875 a committee of the State Medical Society reported that the society's recommendation to establish a State Board of Health had been adopted by the Wisconsin legislature of that year. Fifty years have passed and now in 1925 the Committee on Public Policy and Legislation will announce to the present membership that again the Wisconsin legislature has accepted a major health proposal suggested by the State Medical Society—The Basic Science Bill.

In commemoration of the society's first legislative proposal, the socio-medical smoker at the Annual Meeting is dedicated to the society of 1875.

The present members of the society will be interested in the following extract taken from the minutes of the annual meeting held at Janesville in June 1874: "Dr. J. K. Bartlett, member of the committee appointed by the Society two years ago, to memorialize our Legislature, in reference to the establishment of a State Board of Health, as recommended by the American Medical Association, reported that the committee had neglected to perform its duty, and asked that it be discharged. The request was granted, and a new committee consisting of Drs. John A. Rice, E. L. Griffin and S. A. Ferrin was ordered to prosecute this work."

of Health, who will discuss public health problems and their accomplishments from the viewpoint of the State Board of Health and the private practitioner. Following Doctor Fiedler's address the secretary will call to the front of the room one of the members of the society for a surprise party in his honor. While we would like to tell you the details, the nature of the party precludes this and we can only promise you a very happy surprise.

Following this little surprise, Dr. M. L. Harris, Chicago, will address the members on a subject to be announced in the final program. Doctor Harris has been for many years chairman of the Judicial Council of the American Medical Association. There is no one better qualified to discuss any phase of the general subject of ethical practice and its relationship to the public, than Doctor Harris.

The third invited speaker is Dr. W. D. Haggard, president-elect of the American Medical Association. At the time this issue goes to press Doctor Haggard is still in Europe and it is not possible to definitely assure the members of his presence. Following the three speakers, the meeting will be thrown open to a general discussion on the topics



presented and other topics in the field of socio-medical questions. Your secretary promises cigars and cigarettes; pipe smokers to bring their particular brands with them. No specific hour of adjournment is set and the members may anticipate an evening of fellowship and good discussion of timely subjects.

ON THURSDAY, SEPTEMBER 17th

The scientific sessions of the second day will open Thursday morning. At 12:15 Thursday noon the presidents and secretaries of the county societies and officers of the state society will meet in the dining room of the Auditorium, just under the main floor, for a luncheon to be given in their honor. This annual secretaries' luncheon will be devoted this year to a discussion on the general subject of program material for the county societies. Prior to the general discussion Dr. F. C. Warnshuis, secretary of the State Medical Society of Michigan, will tell the Wisconsin officers of the new plan adopted by Michigan and of its success. Following Doctor Warnshuis' talk the meeting will be thrown open for a general discussion of the Wisconsin problem.

On the same noon alumni of the various colleges will hold their luncheons. The time and place where the various luncheons will be held will be found in the September issue of this Journal and the final program.

On Thursday evening the society will hold its annual banquet and dance in the Fern Room and Red Room of Hotel Pfister. The time set for the banquet is 6:45 sharp and in accordance with custom, the president-elect of the society for 1926 will be introduced, after which Dr. Wilson Cunningham, President, will give the President's Address as the sole address of the evening. Dr. Carl Henry Davis, Milwaukee, chairman of arrangements committee, announces that at 9:00 the floor will be cleared for dancing and that in an adjoi-

ing room tables will be found for those who desire to play cards. While upwards of 400 members and their wives attended the annual banquet at Green Bay last year, plans for the Milwaukee banquet include an estimate of 500 for the largest banquet in the history of the society.

ATTENTION!
ALUMNI UNIVERSITY OF ILLINOIS
P & S—Chicago

The luncheon given during the meeting of the State Society at Green Bay was greatly enjoyed by all who were present. The Milwaukee Alumni present constituted a committee to arrange for a similar luncheon during the Milwaukee meeting in 1925.

This will probably be held at noon on Thursday, September 17th, at a place to be selected later.

Be sure and reserve this date for us. You may meet classmates who you have not seen since graduation. Anyway, you will have a good time.

The Committee.

ON FRIDAY, SEPTEMBER 18th

The scientific sessions will again open at the Auditorium Friday morning, with the afternoon session as the final meeting. The afternoon session will have a new feature in that the program committee, after careful consideration, has included three films of unusual value. The titles of these films will be found in the scientific program.

LARGE EXHIBIT

Reservations have already been made for twenty commercial exhibits. But few booths remain in the commercial exhibit hall and the members are promised an exhibit that will be complete in every line. Just to the rear of the main commercial exhibits all scientific exhibits will be found. A scientific exhibit of unusual interest this year will be that of the radiological section of the state society. The complete list of scientific exhibits will be found in our next issue. The list of commercial exhibitors to date follows:

- Abbott Laboratories, Chicago, Ill.
- Frank S. Betz Company, Hammond, Ind.
- Cameron's Surgical Specialty Co., Chicago, Ill.
- O. Carliczek and Company, Chicago, Ill.
- DeShell Laboratories, Inc., Chicago, Ill.
- H. G. Fischer and Company, Milwaukee.
- Hanovia Chemical and Manufacturing Company, Newark, N. J.
- Horlick's Malted Milk Company, Racine, Wis.
- Huston Brothers Company, Chicago, Ill.



SPECIAL TELEPHONE SERVICE

With the cooperation of the Physicians' Service Bureau of Milwaukee, members in the state at large or in Milwaukee, may have all calls referred to the Bureau throughout the three days of the Annual Meeting. Whether the members are members of the Bureau or not, the Bureau has offered to take care of all calls and locate the physicians. The Bureau will have a special operator at the Auditorium and members expecting calls should have them referred to the Physicians' Service Bureau—Grand 8340.

E. H. Karrer Company, Milwaukee, Wis.
 Kremers-Urban Company, Milwaukee, Wis.
 The Medical Protective Company, Fort Wayne, Ind.
 Mellins Food Company, Boston, Mass.

HOTEL RESERVATIONS

Members are requested to make hotel reservations so that they may secure just the accommodations they desire. Reservations may be made with the hotels direct or a letter to the secretary, stating specifically what is desired, will be answered promptly.

Merrell-Soule Company, Syracuse, N. Y.
 Pengelly X-Ray Company, Milwaukee-Minneapolis.

Radium Chemical Company, Pittsburgh, Penn.
 Roemer Drug Company, Milwaukee, Wis.
 W. B. Saunders Company, Philadelphia, Penn.
 Spencer Lens Company, Chicago.
 Victor X-Ray Corporation, Chicago, Ill.
 Wilson Laboratories, Chicago, Ill.

VIOLATES PRACTICE ACT

That a woman who holds herself out as able to tell people afflicted with rheumatism and other ailments the herbs that would assist them, and sells such herbs, violates the medical practice act, is the opinion of Attorney General Herman E. Ekern. The opinion was given upon request of Mr. James Murray, District Attorney of Fond du Lac county. The statement follows:

July 2, 1925.

Mr. James Murray,
 District Attorney,
 Fond du Lac, Wisconsin.
 Dear Sir:

You state that a certain woman of Indian descent claims to have had considerable experience with herbs and to know their value for medicinal purposes. She holds herself out as one able to tell people afflicted with rheumatism and other ailments the herb that would assist them.

She states that she does not steep the herbs nor sell medicine, but merely gathers them in and tells the people how to prepare them for use. In other words, she sells the herbs and the buyers cook and prepare them.

You inquire if this woman is violating the law.

Sec. 147.02(1), Stats. provides in part:

"No person shall practice or attempt or hold himself out as authorized to practice medicine, surgery or osteopathy, or any other system of treating bodily or mental ailments or injuries of human beings, without a license or certificate of registration from the state board of medical examiners."

When the woman tells the people afflicted with rheumatism and other ailments the herbs to use, she is holding herself out as authorized to treat bodily or mental ailments. I am, therefore, of the opinion that she is violating the law in so doing.

Very truly yours,

C. A. ERIKSON,
 Deputy Attorney General.

CAE:LF

Approved: (In conference.)

HERMAN L. EKERN,
 Attorney General.

Delegates and Alternates Who Will Compose House of Delegates for Seventy-ninth Annual Meeting at Milwaukee

SOCIETY	DELEGATES	ALTERNATES
Ashland-B-I.....	J. M. Dodd, Ashland.....	M. S. Hosmer, Ashland.
Barron-P-W-S-B.....	D. L. Dawson, Rice Lake.....	H. M. Coleman, Barron.
Brown-Kewaunee.....	Eugene Knox, Green Bay.....	S. F. Rudolf, Green Bay.
Calumet.....	J. W. Goggins, Chilton.....	I. N. McComb, Brillion.
Chippewa.....	E. P. Ellenson, Chippewa Falls.....	L. A. Larsen, Colfax.
Clark.....	H. H. Christofferson, Colby.....	F. D. Jackey, Thorp.
Columbia.....	A. F. Schmeling, Columbus.....	H. E. Gillette, Pardeeville.
Crawford.....	A. J. McDowell, Soldiers Grove.....	C. A. Armstrong, Prairie du Chien.
Dane.....	H. P. Greeley, Madison.....	E. V. Brumbaugh, Madison.
	W. H. Sheldon, Madison.....	Ira Sisk, Madison.
Dodge.....	A. E. Bachhuber, Mayville.....	E. S. Elliott, Fox Lake.
Door.....		
Douglas.....	T. H. Shastid, Superior.....	John Baird, Superior.
Eau Claire & Associated Counties.....	J. C. Baird, Eau Claire.....	H. M. Strang, Eau Claire.
	F. E. Butler, Menomonie.....	
Fond du Lac.....	D. N. Walters, Fond du Lac.....	A. C. Dana, Fond du Lac.
Grant.....	M. A. Bailey, Fennimore.....	J. C. Doolittle, Lancaster.
Green.....	W. G. Bear, Monroe.....	J. F. Mauermann, Monroe.
Green Lake-W-A.....	W. E. Buckley, Redgranite.....	Orvil O'Neil, Ripon.
Iowa.....		
Jefferson.....	H. O. Caswell, Ft. Atkinson.....	W. S. Waite, Watertown.
Juneau.....	C. C. Vogel, Elroy.....	
Kenosha.....	O. W. McClusky, Kenosha.....	G. W. McCarthy, Kenosha.
La Crosse.....	W. E. Bannen, La Crosse.....	E. Smedal, La Crosse.
Lafayette.....		
Langlade.....	J. C. Wright, Antigo.....	G. E. Moore, Antigo.
Lincoln.....	W. H. Bayer, Merrill.....	G. Baker, Tomahawk.
Manitowoc.....	J. M. Kelley, Cato.....	E. G. Festerling, Reedsville.
Marathon.....	L. E. Spencer, Wausau.....	A. B. Rosenberry, Wausau.
Marinette-Florence.....	A. T. Nadeau, Marinette.....	J. W. Boren, Marinette.
Milwaukee.....	J. W. Hansen, 521 Grand Ave.....	P. Currer, 2118 North Ave.
	M. L. Henderson, Wells Bldg.....	C. Echols, Majestic Bldg.
	S. Higgins, Wells Bldg.....	G. J. Kaumheimer, 987 2nd St.
	F. McMahon, 120 Wisconsin St.....	G. W. Neilson, 774 3rd St.
	C. Morter, 230 Grand Ave.....	F. Peterson, Wauwatosa.
	F. Pfister, Majestic Bldg.....	H. W. Powers, 770 39th St.
	J. Powers, Majestic Bldg.....	R. Sproule, 141 Wisconsin St.
	J. J. Seelman, Iron Bldg.....	R. G. Washburn, Goldsmith Bldg.
	F. Thompson, 425 E. Water St.....	W. V. Nelson, 149 Lincoln Ave.
Monroe.....		
Oconto.....		
Oneida-F-V.....		
Outagamie.....	E. F. McGrath, Appleton.....	M. J. Sanboron, Appleton.
Pieree.....	G. M. Dill, Prescott.....	R. Cairns, River Falls.
Portage.....	E. P. Crosby, Stevens Point.....	D. S. Rice, Stevens Point.
Price-Taylor.....	E. A. Riley, Park Falls.....	J. T. Speck, Park Falls.
Racine.....	G. W. Nott, Racine.....	C. O. Schaefer, Racine.
Richland.....	G. Parke, Viola.....	W. R. Coumbe, Richland Center.
Rock.....	W. A. Munn, Janesville.....	P. W. Fox, Beloit.
	T. W. Nuzum, Janesville.....	W. J. Allen, Beloit.
Rusk.....	H. C. Johnson, Bruce.....	J. C. Baker, Hawkins.
Sauk.....	H. J. Irwin, Baraboo.....	E. McGrath, Baraboo.
Shawano.....	A. J. Gates, Tigerton.....	C. E. Stubenvoll, Shawano.
Sheboygan.....	O. A. Fiedler, Sheboygan.....	A. Knauf, Sheboygan.
St. Croix.....	O. H. Epley, New Richmond.....	F. S. Wade, New Richmond.
Trempealeau-J-B.....	C. F. Peterson, Independence.....	H. A. Jegi, Galesville.
Vernon.....	W. M. Trowbridge, Viroqua.....	H. J. Suttle, Viroqua.
Walworth.....	E. J. Fueik, Williams Bay.....	M. V. DeWire, Sharon.
Washington-Ozaukee.....	H. M. Lyneh, Allenton.....	H. Albers, Allenton.
Waukesha.....	A. W. Rogers, Oconomowoc.....	U. J. Tibbitts, Waukesha.
Waupaca.....	T. E. Loope, Iola.....	F. E. Chandler, Waupaca.
Winnebago.....	J. M. Hogan, Oshkosh.....	J. W. Lockhart, Oshkosh.
Wood.....	K. W. Doege, Marshfield.....	W. G. Merrill, Wisconsin Rapids.

Committee Announces Preliminary Scientific Program for Annual Meeting at Milwaukee in September

The Program Committee desires to emphasize the fact that the program as set forth herewith is a preliminary one. It is subject to changes, both of omission and addition. The final program will be found in the September issue of the Journal.—The Editor.

INTRODUCTION

This program was designed to accentuate the practical by minimizing the hypothetical and eliminating the empirical. The means are to clarify our perceptions of fundamental laws of life through authoritative presentations, open discussions and interrogations and proved by clinical experiences so that we be thus enabled the better to serve the living.

Contributors have provided synopses of their papers which are published herewith in order that guests and members, in addition to those appointed to open discussions, may prepare themselves to present their own views concisely and pertinently. Frank presentations of divergent viewpoints are essential to successful meetings. Personal compliments and criticisms are usually avoidable obstructions to the establishment of facts, which are impersonal.

An introductory argument for the program and synopses of the entire program are presented to correlate the subjects selected for discussion.

The Society is indebted to all contributors, not only for the time and effort spent in preparation and for the sacrifices incidental to attendance, but also for limiting the scope of each presentation at the meeting to conform with others in carrying out the general plan of sequence and correlation. The complete papers will be published in *The State Journal* and so far as possible in proper order.

Members can show their appreciation and gratitude to the speakers most effectively by promptness in attendance and by contributing in discussions. Sessions will begin according to schedule; speakers, excepting those who introduce a general consideration, will be limited to twenty minutes and discussors to five minutes.

We take this opportunity to record our personal gratitude to the many who have assisted our endeavors to present important subjects in medical practice attractively, clearly and for the benefit of both the public and the profession. We are especially indebted to every speaker, to each one who volunteered contributions, even though the majority could not be accepted, to the President for heartening assistance, and to our Secretary, Mr. J. G. Crownhart.

THE PROGRAM COMMITTEE.

- N. M. BLACK, *Eye, Ear, Nose and Throat*.
 C. H. BUNTING, *Laboratory Sciences*.
 A. T. HOLBROOK, *Internal Medicine*.
 R. E. MORTER, *Clinics*.
 R. W. ROETHKE, *Obstetrics*.
 E. A. SMITH, *Radiology*.
 J. L. YATES, *General Surgery, Chairman*.

General Argument

Immortality of competent cells when provided with suitable nourishment and shielded from irritations has been suggested if not established by the work of Carrel and his associates. These investigators have maintained for fourteen years a vigorous growth of chick fibroblasts cultivated upon artificial media.

Multicellular organisms are mortal because the cells they inherit are unequally virile; suitable nourishment is not invariably obtained and repeated irritations are inevitable. Longevity is determined by limitations in the endurance of cells that contribute to some function essential to life.

The structural hardihood of cells, determined by heredity, is of three grades: supernormal, normal and subnormal. The functional competence, the virility and endurance of cells, varies correspondingly. Functions which are products of metabolism include the activities expressed in growth and reproduction common to all cells and the specific activities, such as covering, support, contraction, secretion, production of daughter cells, origin and transmission of nerve impulses and cerebration, developed by differentiated cells.

All cells contribute to the welfare of the organism. They must be exercised through the actions of normal stimuli else they atrophy in proportion to non-use and their functional deterioration is commensurate with structural weakening. All cells are subject periodically, some more constantly, to the actions of stimuli greater than normal, which are irritations.

Cells of supernormal virility respond to irritations insufficiently severe to cause necrosis by increasing their usual specific activities. If the irritations are prolonged, they develop increments in their common activities of growth and reproduction to furnish the hypertrophies and hyperplasias needed to meet extraordinary demands. Should excess irritations continue, the cells are fatigued and finally exhausted. Hypertrophy and hyperplasia eventually change cell structure so that hypertrophic and hyperplastic cells have less reserve powers and correspondingly narrowed margins of safety. They are therefore more liable to the farther structural alterations that underly fatigue and exhaustion which incur diminutions, perhaps abnormalities, in function products.

Cells of normal virility respond to comparable degrees of irritations as do more virile types but they have less initial margins of safety, less endurance. In consequence, they can develop less energies expressed in hyperactivities and can continue such hyperactivities as they are able to produce for shorter periods. Hence degrees of irritations that would be excessive for normal cells could be tolerated by the supernormal. Likewise degrees of stimulation for the supernormal would, if continued, lead to fatigue and exhaustion of normal cells.

Cells of subnormal virility differ from those of normal virility much as they in turn differ from the super-

virile. Two differences are noteworthy. Normal stimuli to which all cells are constantly subjected acting upon subvirile cells lead to untimely fatigue and exhaustion. Hence precocious senility of brains and other organs in those individuals of unfortunate heritage and the familial predispositions, for example, to psychoses, cretinism, myocardial degeneration, pernicious anemia, nephritis and arteriosclerosis. The second difference is seen in the atypical responses of subcompetent cells to chronic irritations. They often react, probably in consequence of laws promoting self-preservation, with excessive hyperactivities, which soon become atypical, and, if un-suppressed, are positively harmful to the organism. Thus perhaps can be explained certain of the active mental disorders included in dementia praecox, various polycythemiae, exophthalmic goiter, acromegaly and neoplasms.

In brief, the inherent structural integrity and the functional capacities of cells are subject to modifications by the stimulations and irritations they receive. Virility of cells, like that of individuals, tends to increase up to middle life and to decrease thereafter. The obvious dangers in treatment are to overwork cells so as to induce or to intensify the changes that produce fatigue and exhaustion, in short to provoke precocious and perhaps abrupt senility.

Diseases in general are contests within living hosts between focal and disseminated irritants which constitute offense and the local and general responses to those irritations which comprise defense.

Irritants are either formed or unformed. Formed irritants are parasitic cells introduced into the body or parasite-like cells produced by atypical hyperactivities of certain body cells hitherto relatively normal. Unformed irritants include the diffusible noxious products of the activities of abnormal cells, the accumulations through faulty eliminations of waste products of normal cells and unhealthy diffusible substances introduced into the body. Both the formed and unformed irritants are transported by blood and lymph circulations.

Local reactions are the hyperactivities of cells directly affected by focal irritations reinforced by formed (leucocytes) and unformed (excess oxygen, water and food, and protective substances, e. g. antibodies) assistance delivered through the circulation. General reactions are but other local reactions provoked in remote cells by dissemination of irritants through the circulation. They include productions of protective secretions of the nature of antibodies, increased formation of leucocytes and the actions of the ductless glands.

Susceptibility to irritants, the initiation, evolution and outcome of disease, is determined by disproportions between offense and defense. A disease is benign for a given hosts, if spontaneous recovery is possible; otherwise it is malign. The same irritant can provoke a benign process in some hosts, malign maladies in others.

Treatment can augment defense and restrict the intensities, disseminations and durations of irritations. It can facilitate convalescence in benign diseases, convert less malign into benign maladies and prolong the lives of sufferers from more malign affections. Actions

of offense and reactions of defense are governed by biologic laws. Effective methods of treatment cooperate with, never antagonize, those laws which are immutable.

The casting out of devils is a divine attribute. *Human agencies can promote recoveries*; they cannot "cure" disease. "Cures" exist only in laymen's dreams and are the stock in trade of charlatans.

WEDNESDAY, SEPTEMBER 16th

Morning Session

ARGUMENT

Cells are born, live and die in accordance with constant laws of life. Life potentialities of cells control the living of organisms formed of cells. Practical medicine succeeds as it discovers biologic laws and learns by experience to modify influences in accordance with those laws to the end that individuals may enlarge their physical assets and minimize their liabilities.

There is no mystery in Nature. Man seeks to clothe his ignorance by attributing the unknown to the supernatural.

Physicians assume responsibilities when they accept the privileges of the profession. A large measure of these responsibilities is to seek the truth, to try to popularize truth and to learn to employ the truth in all the ramifications of practice.

Knowledge, whatever be its sources and scopes, eventually is of practical utility. Science, the knowledge of Nature, brings with it ever increasing means to promote human welfare. It adds to our perceptions of the sublimity of the universe and of the solemnity of our obligations. Man made dogmas and superstitions inveigh against science as they cannot withstand light.

Mother Nature is the only consistent fundamentalist. She bases her practices upon laws that are fundamentally as sound as they are unchangeable. She seeks by experimentation to advance in accordance with those laws. So Mother Nature is also the only consistent progressive.

We physicians are notoriously enslaved to prejudices and superstitions of practice. Instead of following the injunction to prove all things and hold fast to that which is good, we are inclined to prove nothing and to adhere to our illusions achieved as medical students.

Time has passed when medicine can be dominated by schools, cults and dogmas. The opinions and practices of one individual are as good as another's provided they are based on facts. Hence the need to exchange views upon biologic subjects and to discover how fundamental principles find their happiest application in practice.

1. GENERAL BIOLOGIC CONSIDERATIONS (Illustrated)—M. F. Guyer, Ph.D., Professor of Zoology, University of Wisconsin.

Abstract: Living and non-living; the cell as the structural and physiological unit; why cell theory is one of the most important biological generalizations; structure and function of cells; cellular metabolism; growth; reproduction as a form of overgrowth; the machinery of inheritance; the "cell-republic" versus the "organism-as-a-whole" idea; embryogenesis, a matter of metabolic gradients; monstrosities and their production; phenomena of regeneration and regulation; factors of safety and compensatory phenomena; what we have learned from grafts and tissue-cultures; some biologic aspects

of endocrines, vitamins, and antibody formation; hyper- and hypo-activities, and perverted functions.

Utilizing the natural defenses of the body in medical practice; the limits of adaptability; giving "nature" a chance; the medical specialist and the "organism-as-a-whole" point of view; specialization together with integration, the test of high or low in the animal kingdom; the physician as social adviser.

2. BIOLOGIC BASIS OF IMMUNITY

Abstract: Irritations are antagonistic to health and life. Irritants are directly antagonistic to cell welfare or they induce cell activities whose products are antagonistic to cell welfare.

A response to antagonistic substances is the formation of anti-antagonistic or protective substances. Protective substances neutralize anti-antagonistic substances and restrict activities of cells that produce them. Sources of protective substances. Means whereby they are activated. Nature of compensations and adaptations.

3. INFLUENCE OF DUCTLESS GLANDS UPON BIOLOGIC REACTION—E. C. Kendall, M.D., University of Minnesota, Mayo Foundation.

Abstract: The function of the ductless glands is to manufacture certain essential chemical compounds which are necessary for normal cellular activity. These compounds are used by the cells to produce energy and maintain a normal state of being. Hyper or hypo activity of each ductless gland is reflected in the status of all the cells in the body.

The compounds elaborated in the ductless glands do more than act as stimulators or messengers according to the original conceptor of hormones. The active agents of the ductless glands are catalysts which carry out definite chemical reactions in the cells.

A study of these reactions and the mechanism by which they are produced is the opportunity and the duty to the biological chemist and bio-physicist. Some of these chemical processes which have been discovered will be presented and discussed in relation to the functioning of cells and to problems of metabolism, energy production and immunity.

4. BIOLOGIC ASPECTS OF PATHOLOGY—C. H. Bunting, M.D., Professor of Pathology, University of Wisconsin.

Abstract: Pathology includes knowledge of all factors concerned in the inception, progress and results of disease. Morbid anatomy is merely a physical evidence of warfare between offense and defense and a means to determine the outcome of a battle and how it may be influenced.

Local reactions indicate not only the hyperactivities of the regional fixed tissue cells but also the effectiveness of the cellular and diffusible reinforcements delivered through the circulation. General responses are all important as they include the development of protection of all kinds and the actions of the ductless glands. Much of the protection is developed within the circulatory apparatus and all delivered by it. Consequently, changes occurring in the blood-forming tissues, registered in the blood cells formed, and in the myocardium, manifested in the rate and power of its contractions, are indices of defense. Likewise the aids to defense which maintain the integrities of the circulatory apparatus in the formation and deliveries of blood are most desirable in practice.

Biologic methods of treatment, if the artificial aids of mechanics and drugs be excluded, consist of light, heat, exercise and food. They are serviceable as they foster resistance, defense and repair which are dependent upon functions of cells. Cell functions are measured by their basic activities of growth and reproduction. Wherefore the value of knowing how heat and exercise, light and food can be used to promote cell growth and reproduction.

5. HEAT AND EXERCISE: THEIR INFLUENCE UPON COMPETENCE OF CELLS AND INDIVIDUALS—A. J. Carlson, M.D., Professor of Physiology, University of Chicago.

Abstract: Effects of temperature upon formation, delivery and distribution of blood. Means of obtaining heat—dry, moist, electric, etc. Methods of applying heat—internal, external and diffused.

Activities—motion, secretion, cerebration—the means to prevent atrophy of non-use and subsequent hypoxia. Local and general immobilization and its evil effects. Timely reactivation of activities is the means to recovery.

The degree of restoration of activities ultimately attained is the measure of recovery. The interval between inactivation incidental to injury and disease and the restitution of activities is convalescence or period of morbidity.

The shorter the period of convalescence, the less the extent and duration of inactivation or immobilization, the more complete the ultimate recovery.

6. LIGHT AND FOOD: THEIR INFLUENCE UPON COMPETENCE OF CELLS AND INDIVIDUALS—H. Steenbock, Ph.D., Professor of Agricultural Chemistry, University of Wisconsin.

Abstract: Powers of defense and repair are commensurate with those of growth and reproduction. Sunlight has its effects upon growth. Food has its effects upon growth. Sunlight can affect food so that food is more effective in promoting growth.

Indications as to how light and food can be employed to foster individual welfare in disease as well as in health. Therapeutic values of artificial lights.

Afternoon Session

ARGUMENT

It is insufficient to try to learn the biologic reasons why natural methods may be employed beneficially in practice. We must know how they can be utilized so that they will be effective. None has equalled in any special endeavor Rollier's success in using proper feeding, heat, exercise and light in treatment of bone and joint tuberculosis. His superior results have depended upon excellence of bone healing.

Bone healing is the basis of fracture therapy. Treatment of fractures has again become a live issue. Healing of fractures involves definite cell responses which can be influenced by food, light, heat and exercises.

Tuberculosis exemplifies the chronic malign diseases which require immediate aid to permit of temporary recoveries and constant care to make the recoveries permanent. An evidence of breaking resistance is dissemination of disease. Renal tuberculosis developing late in pulmonary phthisis is such evidence. It teaches much concerning the resistance and healing of kidney structures and how renal tuberculosis may be combated.

Judgment of the efficacy of treatment is too often based upon early results. The late results are the safer criteria and it is well to consider how the late results can be improved.

Failures to secure complete recoveries entail restricted functions expressed in disabilities. All should know the authoritative decisions upon the degrees of disabilities attributable to impaired vision.

In no branch of medicine has the influence of heredity been more generally recognized and perhaps over emphasized than in mental disorders. Heredity is not the sole influence else there would be little help for these un-

fortunates. They illustrate the damaging effects of stress upon subcompetent cells, and their improvement under proper treatment is one of the most encouraging examples of the possibilities in aiding recoveries of function.

7. ROLLIER'S METHODS OF TREATING TUBERCULOSIS OF BONES AND JOINTS WITH SUNLIGHT AND ACTIVE MOTION (Illustrated)—E. A. Fletcher, M.D., Milwaukee.

Abstract: Physics of sunlight. Penetrations of tissues by sun's rays. Effects upon cell activities. Methods used by Rollier in grading exposures to sunlight. Harmful effects of injudicious exposures. Light and its accompanying heat not the only means employed. Fresh air and diet not neglected. Early and increasing active motion an important factor.

8. EXPERIMENTAL STUDIES OF BONE HEALING (Illustrated)—F. D. Geist, M.D., University of Wisconsin.

Abstract: Experiments indicate the following sequence of events in bone-healing uncomplicated by infections:

1. Advent of fibroblasts and their invasion of blood clot filling the defect.
2. Thickening of fibrous periosteum and osteogenetic (cambium) layer adjacent to defect.
3. Appearance of new bone, derived from cambium layer, between cambium layer and cortical bone.
4. Cartilage, source and significance not determined, may appear on fifth day on external surface of bone adjacent to defect.
5. Bridging of defect by new bone.
6. Absorption of new bone in external and internal calluses by osteoclasia.
7. Absorption of new bone without aid of osteoclasts, bone dissolution or atrophy.
8. Excavation into original bone margins of defect.
9. Invasion of excavations by osteoblasts.
10. Deposition of new bone and the establishment of firm dovetail union.

9. BIOLOGIC METHODS APPLIED TO FRACTURE THERAPY (Illustrated)—G. W. Stevens, M.D., Milwaukee.

Abstract: Dissatisfaction with results obtained by modern methods of treating fractures, already widespread, is increasing. Reasons are so definite that the explanation is simple.

Only healthy cells are competent in resistance, defense and repair. Healthy cells are constantly and actively exercised, provided with adequate blood supply and are not hidden under a bushel. Cells atrophy when inactivated, and denied suitable blood supplies. Their growth and repair powers are reduced if light be withheld.

Immobilization of extremities causes them to atrophy and to become rigid.

Immobilization of individuals leads to rigidity and atrophy of the body. Natural methods of treating fractures which were evolved with unerring accuracy during some thirty million years minimize immobilization of either organism or extremity. Light is not withheld.

Complete and prolonged immobilizations are chief features in the treatment of fractures developed by man's superior wisdom in thirty centuries.

Since plaster of Paris became available light has usually been prevented from exerting its beneficent influence.

Brief report of a series of patients treated according to natural methods is presented to show that results thus obtainable are superior to those secured with orthodox routine.

10. RENAL TUBERCULOSIS: CLINICAL AND EXPERIMENTAL (Illustrated)—E. M. Medlar, Associate Professor of Pathology, University of Wisconsin.

Abstract: Experiments and investigations (guinea pigs and rabbits) showed:

- (a) Infection was hematogenous.
 - (b) Lesions in order of frequency were: (1) cortical; (2) cortico-medullary; and (3) medullary.
 - (c) No evidence of "excretory bacilluria" without focal renal lesions.
 - (d) Character of lesion determined by number of tubercle bacilli present therein.
 - (e) Renal tuberculosis present in 80% and usually is bilateral.
 - (f) Individual tuberculous renal lesions can heal.
- Studies on human beings dying from pulmonary tuberculosis now in progress have thus far permitted the following observations:*
- (a) Kidneys commonly affected but lesions differ from those of renal phthisis.
 - (b) Lesions are rarely unilateral.
 - (c) Hematogenous infections and multiple lesions are the rule.
 - (d) Renal lesions can heal.

Evidence at hand, admittedly incomplete, suggests the advisability of establishing the constant presence of tubercle bacilli in urine by repeated examinations, of considerable destruction of renal tissue and of the futility of non-operative treatment and of the competence of the opposite kidney before resorting to nephrectomy.

11. SIGNIFICANCE OF LATE RESULTS OF SURGICAL TREATMENT—W. E. Fairfield, M.D., Green Bay.

Abstract: End results are hardly less significant than immediate recoveries from operation. Operations for relatively insignificant intra-abdominal lesions frequently are followed by avoidable postoperative complications.

Patients submitting to operation have the right to expect relief from present distresses without the addition of others. Necessity for reviewing end results. Importance of accurate preoperative diagnoses. Improper and inadequate incisions. Prevention of post-operative adhesions and herniae.

12. COMPENSATION FOR LOSS OF VISION DUE TO INDUSTRIAL DISEASES OR INJURIES—N. M. Black, M.D., Milwaukee.

Abstract: A resume of the report of the Committee of the Ophthalmic Section of the American Medical Association on Compensation for eye injuries. This report was accepted and adopted by the Section and by the Legislative Body of the Association at the Atlantic City meeting this year.

The aim of the committee is to establish a method of determining the loss of visual efficiency of a person who has suffered any degree of impairment of vision as the result of occupational disease, or injury. Such loss is to be the basis on which the amount of compensation shall be determined.

Compensation for loss of vision should be that proportional part of the compensation provided by law for total permanent disability which expresses the percentage loss of visual efficiency of the individual in pursuing a gainful occupation.

Total permanent disability of both eyes is identical with total permanent disability of the individual.

13. HEREDITARY AND ENVIRONMENT INFLUENCES IN PSYCHONEUROSES—M. Q. Howard, M.D., Wauwatosa.

Abstract: An assumption that man is the product of and limited by the contributions of his ancestors is a discouraging one as regards his development. Heredity and environment are the factors underlying the psychoneuroses. Discussion of the hereditary factors preface by a resume of recent developments in knowledge of the subject. About 90% of the psychoneurotics seen give a history of hereditary taint. The disease in the offspring is not necessarily the same as that in the ancestor. Transmission does not follow closely the lines of accepted theories of heredity. A morbid aptitude or a constitutional predisposition is transmitted. Organic concomitants are not infrequent.

Importance of environment is illustrated by psychoneuroses precipitated by a mal-adjustment. Situations and requirements arise in lives of individuals that cannot be met. An inherent weakness sooner or later prevents individuals from making adjustments to demands of life.

Treatment is designated: First, to modify the influence of heredity by proper environmental changes. Patients are encouraged and aided to adjust themselves to their environment rather than to seek an environment to which patients are peculiarly adapted. Second, the amelioration of organic malfunctions that are frequently a part of psychoneurosis.

THURSDAY, SEPTEMBER 17th

Morning Session

ARGUMENT

Length and activities of life depend mainly upon capacities to form, to deliver and to distribute blood. Anemia is significant because in addition to being a disease, it weakens defense against and predisposes to other diseases in general and affections of the heart and vasomotor apparatus in particular.

No phase of medicine is as important as knowledge of the causes, effects and means to prevent and to control derangements of the entire circulatory apparatus. We are fortunate in having authorities to present the biologic and the clinical aspects of anemia so that we can learn the rationale of what to do and above all of what not to do in practice.

Experience of anemia in internal medicine, obstetrics and surgery will aid in illustrating and emphasizing basic principles. Transfusions of blood have become necessities under many conditions. Suitable donors and facilities for blood grouping are not available everywhere and at all times. Stores of preserved blood would be of great service even if less desirable than whole fresh blood. A method for preservation and storage would be welcomed. Conceptions of excessive vomiting as one of the toxemias of pregnancy correlate them wrongfully with anemias. This very important subject is introduced here because of maladies attributable to disturbances in the quality if not the quantity of blood.

A clinic devoted to anemias by Doctor Braun will develop actual problems and their solutions.

14. PHYSIOLOGIC ASPECTS OF ANEMIAS—C. D. Leake, M.D., Associate Professor of Physiology, University of Wisconsin.

Abstract: Normal methods of blood formation and destruction outlined. Mechanisms controlling blood formation and destruction described.

Anemias due to excessive blood destruction or restricted blood formation or to both of these agencies.

Benign anemias are those from which spontaneous recovery is possible. Treatment expedites recoveries.

Spontaneous recoveries from malign anemias are impossible. Treatment can make recovery possible in the less malign forms and prolong life in the others.

Treatment limited to reducing blood destruction, increasing blood formation and transfusions.

Proofs of the futility of using iron, arsenic, etc. Physiologic significance of spleen-bone-marrow extract, its values and dangers.

Whatever be the nature of anemia, it is harmful to attempt to stimulate fatigued or exhausted bone marrow. Relief obtained by transfusions, preferably of whole blood unchanged by addition of anti-coagulants.

15. CLINICAL ASPECTS OF ANEMIAS—G. O. Broun, M.D., St. Louis, Mo.

Abstract: Evidences of increased blood destruction are increased output of urobilin in stools, occurrence of increased quantities of bilirubin in blood plasma (in the absence of hepatic lesions) and presence of hematin and hemoglobin in blood plasma.

Above conditions are present in pernicious anemias, but may be present to some extent in congenital hemolytic jaundice, typhoid fever, sprue, septic endocarditis and malaria.

Increase in plasma bilirubin is occasionally seen in tuberculosis.

Anemias associated with malign neoplasms and chronic nephritis are accompanied with diminished blood plasma and stool pigments. Probably these are characteristics of deficient blood formation. The evidence is, however, inconclusive. Aplastic anemias of unknown etiology probably belong in this category.

Histologic studies of bone marrow show that anemias producing increased plasma pigments usually accompanied by unusual phagocytosis of erythrocytes by bone marrow endothelium. Hence a supposition that anemias of this type are to some extent attributable to toxins that incite bone marrow to increased phagocytosis or to the presence in the blood stream of antagonistic substances which injure erythrocytes and lead to their removal because they are incapable of normal function.

16. ANEMIAS REDUCE POWERS OF RESISTANCE, DEFENSE AND REPAIR. THEIR TREATMENT IS URGENTLY NEEDED, FOR EXAMPLE IN—

A. DISEASES OF INTERNAL MEDICINE—W. J. Egan, M.D., Milwaukee.

Abstract:—Anemias are significant in two ways. They predispose to other diseases and develop as complications in the course of many maladies. They are of special importance to internists therapeutically both in prophylaxis and in treatment. Means to combat anemias are clearly defined. Methods must be varied to meet the requirements of each patient. One factor is common to all—the need for relief is urgent. Procrastination in securing relief is deplorable.

B. PUERPERAL INFECTIONS—R. E. Morter, M.D., Milwaukee.

Abstract: Early and rapidly progressing blood destruction is the rule. Defense mechanism is correspondingly impaired. Prompt restoration of blood volume by transfusions of whole blood supplies the only means for immediate rehabilitation of defense and provides opportunities for recovery.

Two types of patients are discussed:

1. Those critically ill. Anemia is profound; temperature is high; chills are common and pulse rate is usually rapid.

2. Those less seriously ill. Anemia is not pronounced; temperature is not high; chills are uncommon and the temperature and pulse rate are but moderately elevated.

Transfusions, often multiple, are essential to save lives of the patients in group 1. A majority of those in group 2 are destined to recover after a protracted and stormy convalescence. Transfusions will reduce the mortality rate and are requisite to curtailment of durations and degrees of disabilities.

C. IN PREPARATION FOR OPERATION—Forrester Raine, M.D., Milwaukee.

Abstract: Serious operations, however performed, add to the burdens of defense and reduce powers of resistance and repair.

Ability to tolerate operations is determined by individual competence.

Competence, or the capacity to develop cell energies in excess of those required to support inactive life, depends largely upon deliveries to and utilization by cells of oxygen and nourishment.

Competence is therefore commensurate with qualities and quantities of blood and with myocardial integrities.

Anemia reduces the virility of all cells and therefore patients' powers of resistance, defense and repair. No

cells whose activities are essential to life are more affected than heart muscle as evidenced by the majority of operative and postoperative deaths being due to myocardial insufficiency.

Heart muscle is impaired by overwork (fatigue), starvation (anemia) and intoxication. Injured myocardia provided with opportunities to restore actual and latent energies by rest, overfeeding and detoxication.

Blood transfusions quickest and surest means to return blood volumes and qualities to normal and to regain margins of safety.

Summary of methods of preoperative treatment of anemic patients.

17. PRESERVATION OF BLOOD FOR TRANSFUSION—Miss M. C. Perry, Milwaukee.

Abstract: Transfusion would be more widely employed with great benefits in both civil and military practice if blood could be preserved outside the body for considerable periods. Satisfactory methods of preservation would not destroy blood corpuscles, interfere little if at all with oxygen-carrying powers of erythrocytes, fail to change normal constituents into bodies resembling foreign proteins, exert no unfavorable influences upon blood coagulation within the recipient or be toxic thereto.

Description of methods devised to meet these requirements.

Report of experimental and clinical observations.

18. EXCESSIVE VOMITING OF PREGNANCY AND ECLAMPSIA—William Thalheimer, Milwaukee.

Abstract: Excessive vomiting of pregnancy, usually a complication occurring early in pregnancy, whereas eclampsia occurs later, even postpartum.

Excessive vomiting of pregnancy is related to insufficient carbohydrate ingestion, perhaps to abnormal carbohydrate metabolism. It may terminate in acute yellow hepatic atrophy, probably never in eclampsia. In severe phases it produces intense acidosis. Relief is afforded by intravenous injections of glucose which are more efficacious if insulin is administered with the glucose.

Eclampsia includes several conditions divisible into those with, and those without, renal injuries. The nature and treatment of these two types will be discussed.

19. CLINIC ON ANEMIAS—G. O. Brown, M.D., St. Louis, Mo.

Afternoon Session

ARGUMENT

Normal volumes of good blood are essential to health but are of little value if suitable blood pressures are not maintained. Hence the significance of myocardial integrity. Means to recognize, to prevent and to aid myocardial incompetence are presented.

Cardiac function needs protection in pregnancy. Compensatory hyperplasias of thyroid during gestation particularly common in goiter districts are well understood and known to be avoidable.

Malfunction of thyroid giving symptoms comparable to Von Basedow syndrome is less commonly recognized.

Appreciation of need for prompt relief and knowledge of means thereto are welcome additions to knowledge of thyroid diseases and complications of pregnancy.

Information as to the influence of the sympathetic nervous system upon muscle tonus and the effects of sympathectomy is desirable, particularly as a foundation to conceptions of what may be done to relieve angina pectoris.

No serious intrathoracic disease fails to add burdens to the circulation. Intrapulmonary syphilis is infre-

quently recognized as such and as a rule is improperly treated.

20. IMPORTANCE OF EXACT DIAGNOSIS IN CHRONIC HEART DISEASE—J. A. E. Eyster, M.D., Professor of Medicine, University of Wisconsin.

Abstract: The circulation in compensated chronic heart disease is normal. Diagnosis required for prognosis and treatment. Necessary to differentiate between accidental systolic murmurs and organic mitral lesions or relative mitral insufficiencies and between mitral stenosis and aortic disease. Determination of presence or absence of left ventricular hypertrophy helpful in diagnosis. Usually possible to do this with inspection, palpation, percussion, and auscultation. Special instrumental observations unnecessary as a rule.

The circulation in decompensation is subnormal because of myocardial insufficiency. Venous pressure now known to place the initial intolerable load upon myocardium. Abnormally increased pressure in systemic veins occurs only in right ventricular subcompetence. Extent and variations in venous pressures indicate extent and progress of incompetence. Estimations of venous pressure are easy and invaluable in rational treatment of decompensation.

21. DETERMINATION OF TRANSVERSE CARDIAC DIAMETER (Illustrated)—E. J. Hodges, M.D., Madison.

Abstract: Mensuration of cardiac volume by X-ray. Explanation of tables indicating normal cardiac area. Presentation of new formula for computing transverse diameter and estimating the normal in any individual.

Exposition of the value of these precise methods in cardiac diagnosis.

Lantern slide demonstration of methods employed.

22. VALUE OF ELECTROCARDIOGRAPHY IN ESTIMATING MYOCARDIAL RESERVE POWER (Illustrated)—M. F. Rogers, M.D., Milwaukee.

Abstract: 1. Changes of the "R" wave, "QS" interval and "T" wave due to a disordered functioning of the intraventricular arborizations of the auriculoventricular bundle.

2. May reveal, when repeatedly employed, affections of the heart muscle, and makes possible a distinction between toxic injuries of the myocardium and actual organic change.

3. An aid in determining operative risk, preoperative cardiac therapy and postoperative cardiac diagnosis and treatment.

23. HEART IN ATHLETICS—L. M. Warfield, M.D., Milwaukee.

Abstract: Increase in heart disease in young people indicates need for more careful supervision of those in athletics.

Methods employed in the Vienna Heart Station. Conclusions from studies of thousands of young adults continued over several years.

Reasons for careful consideration of this subject as a means to assure cardiac security.

24. OBSERVATIONS ON THYROID DURING PREGNANCY—Solomon Strouse, M.D., Chicago, Ill.

Abstract: A certain number of pregnant women develop a syndrome characterized by most of the symptoms indicative of so-called hyperthyroidism. Usually the symptoms are of short duration but are distressing. Presumably, this manifestation should, in view of the observations of Marine and others, be the result of physiologic strain upon the thyroid. If this hypothesis be correct, iodine therapy is indicated, and should be effective.

Reports of corroborative observations.

25. PRESENT STATUS OF SYMPATHECTOMY—W. J. Meek, M.D., Professor of Physiology, University of Wisconsin.

Abstract: Present conceptions of the influence of sympathetic nervous system upon muscle tonus based upon experimental and clinical data found in literature.

Personal observations, experimental and clinical, briefly reported. Reasons for conclusions contrary to those of Hunter and Royle.

Experiments demonstrating the influence of sympathetic nervous system upon muscle fatigue. Results of treatment to date.

26. PLEUROPULMONARY AND BRONCHIAL SYPHILIS (Illustrated)—E. L. Miloslavich, M.D., Professor of Pathology, Marquette University.

Abstract: Incidence noted in necropsies.

Various types noted, and their association with other metaluetic diseases.

Morphologic diagnosis and means of differentiation.

Luetic lesions of lung and of pleura.

Syphilitic stenosis of main bronchi.

Methods of ante-mortem diagnosis suggested.

FRIDAY, SEPTEMBER 18th

Morning Session

ARGUMENT

Radiotherapy is being employed everywhere in treating large numbers of patients for divers diseases. Much help has been given. More harm has been done. Preposterous claims have been made to have achieved the impossible in curing the incurable by prominent specialists and re-echoed by others. Examination of these reported "cures" shows them to have been based upon observations which are inconclusive because insufficient in detail and duration. Methods of treatment have been described but the rationale has not been established. In short, practice is empirical.

Facts are desirable. What are emanations? What influences may they exert upon deep and superficial living cells? What responses can be obtained from cells of normal, supernormal or subnormal virility? How can these responses be developed so as to help each particular patient under existing conditions not merely to immediate improvement but to ultimate recovery? What is the difference between emanations produced by radium, by X-ray machines of high and of low voltage? What is the margin of error in dosage?

The severest test of the efficacy of radiotherapy is its ability to control the growth of deep and superficial neoplasms without permanent injury to patients.

Accurate information is at present limited, disconnected and difficult to interpret. Emanations are known to be irritants. Irritants can induce hyperactivities, hypoactivities and perverted activities of cells. The effects of irritations are general as well as local. Cells may be directly affected by irritants or indirectly affected through the responses of other contiguous and remote cells to irritations. Emanations can destroy tumor cells subjected to immediate exposures. Voluminous testimony is available to uphold an hypothesis that deeply placed neoplastic cells can be destroyed by selective actions of emanations without destruction of contiguous normal tissue. Evidence has been presented which indicates that such deep destructions as occur are caused by inflammatory responses induced in contiguous and remote normal cells.

Malign tumors cause general as well as focal irritations and recoveries therefrom depend upon natures of general and local responses. Patients seldom recover after cachexia develops. Radiation can induce fatal

cachexia in robust animals and has contributed to the progress of cachexia in human beings.

Manifestly we must know more about all of the actions and reactions incidental to radiotherapy in order to avoid doing harm in our efforts to relieve. Much of this knowledge must come from clinical experience and it will develop more rapidly and more certainly if empiricism be discarded. Unimaginative ignorance alone can fail to appreciate the enormous possibilities in radiotherapy. Unbalanced enthusiasm only will fail to see that the opportunities for giving more effective help in diseases already being treated by radiation and of extending this help to other diseases are at present restricted by ignorance.

Those having the responsibilities of advising their patients as to the possibilities of radiotherapy need to keep pace with developments in this specialty quite as much as the radiotherapists themselves. The specialists are cooperating in this session to present information in such form that all may be able to understand.

27. PHYSICAL BASIS OF THE PHYSIOLOGIC ACTION OF X-RAYS—H. N. Beets, M.D., Chicago.

Abstract: Nature of emanations and how they are produced. Variations in nature of emanations delivered. Margins of error in dosage.

Review of recent researches in physics and chemistry which have bearing upon present knowledge of the physiologic action of X-rays.

Comparison of X-ray and radium emanations.

28. ANATOMIC EVIDENCE OF RESPONSES TO RADIATION (Illustrated)—C. R. Bardeen, M.D., Professor of Anatomy and Dean of the Medical School, University of Wisconsin.

Abstract: A summary of what is known of the effects of radiation upon cells, upon organs and upon organisms.

Evidence that radiation can provoke malfunction, induce cellular hyperactivities and hypoactivities.

Local and general responses to radiation.

Potentialities and dangers and their bearing upon radiotherapy.

29. X-RAY THERAPY OF MALIGN NEOPLASMS (Illustrated)—U. V. Portmann, M.D., Cleveland, Ohio.

Abstract: Physical basis of deep X-rays.

Methods of application illustrated by charts showing how deep radiation is directed to portions of the body.

Summary of present knowledge of biologic effects of radiation upon normal and neoplastic cells and upon the organism as a whole. Application of this knowledge in treatment of malign neoplasms.

Results obtained in combatting cancer of the breast and uterus.

30. RADIUM IN TREATMENT OF MALIGN LESIONS OF MOUTH, FACE AND NECK—T. E. Jones, M.D., Cleveland, Ohio.

Abstract: Anatomic explanation of the early dissemination of cancer cells.

Need of early diagnosis and prompt treatment. Responsibilities of dentists in recognizing precancerous lesions and insisting upon proper and immediate treatment.

Non-operative treatments outlined. Particular advantages of electric coagulation and buried radium emanations.

Methods of action outlined and illustrated by results obtained in treating cancers of mouth and tongue.

31. CARCINOMA CERVICIS UTERI TREATED WITH ELECTRIC COAGULATION AND RADIUM—K. H. Doege, M.D., Marshfield.

Nature of lesions and general conditions of patients treated.

Biologic and physiologic reasons for treatment and why treatment can be expected to promote patients' welfare. Conditions governing choice of treatment.

Review of experiences with methods employed emphasizing causes of success and particularly the causes of failures.

32. X-RAY TREATMENT OF PERTUSSIS—II. I. Bowditch, M.D., Boston, Massachusetts.

Abstract: Rationale of treatment. Methods employed. Effects upon patients noted in altering the usual course of the disease. Noteworthy blood changes. Summary of results and observations.

33. CINEMATOGRAPH OF GASTRIC MOTILITY.

Abstract: Motion pictures showing peristalsis in normal and ulcerated stomachs.

This film is fascinating and instructive.

The interest it compels is only equaled by the other film to be shown at the end of the afternoon session.

Afternoon Session ARGUMENT

All of the diagnostic usages of radiography and radiology could not be included in this program. One aspect, that of cardiac diagnosis, has been presented. The urinary tract has been neglected entirely as it received consideration last year. Stomach, gall bladder and the central nervous system are presented because of recent developments.

No meeting should ignore obstetrics. Mothers are entitled to escape the later complications of labor and certainly to relief when they develop.

The closing feature, the moving pictures of pulmonary tuberculosis, is enough in itself to repay attendance at this meeting if nothing else were presented. At any rate this advice comes from radiologists. All should see the film. If it fail to please, do not blame the committee for acting upon expert advice.

34. GASTROENTEROSTOMY FOR GASTRIC ULCER FROM ROENTGENOLOGIC VIEWPOINT (Illustrated)—H. E. Curl, M.D., Sheboygan.

Abstract: Stomach divisible in structure and in function into four parts.

Normal contractions common to all parts and a measure of other functions. Abnormal contractions are evidence of malfunction.

Therapeutic objective is to rehabilitate normal function which in stomach would be determined by nature of its contractions.

Gastroenterostomies can be divided into operations of choice and of necessity. They succeed or fail as they re-establish or fail to re-establish normal gastrointestinal functions. How can they be performed so as to minimize failures?

Presentation of lantern slides to show good and un-

satisfactory gastric motility after gastroenterostomy. Indication of reasons for failures and how they can be avoided.

35. CHOLECYSTOGRAPHY (Illustrated)—F. W. Mackoy, M.D., Milwaukee.

Abstract: The need of a method of obtaining definite data from this region is obvious.

Graham defines Cholecystography as a means of making the gall bladder opaque to the roentgen ray by administering certain substances which are excreted largely into the bile.

Physiological principles involved: Selective excretion of phenolphthalein compounds by the liver (Rowntree & Abel); concentration of bile by the gall bladder (Rous & McMaster); control of the filling and emptying of gall bladder, etc.

Technique: The intravenous, oral, duodenal, and rectal administration of the sodium salt of tetrabromphenolphthalein, and tetraiodophenolphthalein. A detailed description of the oral method with its advantages and disadvantages, as a routine procedure.

Contraindications. Reactions.

Roentgenologic appearance of normal gall bladder.

Evidences of lesions. Value of demonstrations of negative gall bladders in differential diagnoses.

Discussion of patients. Conclusions.

36. MYELOGRAPHIA (Illustrated)—H. H. Reese, M.D., Madison.

Abstract: Sicord first indicated the feasibility of demonstrating obstructions within the spinal canal by injections of substances which could be detected radiographically. Use of iodipin for this purpose described.

37. VENTRICULOGRAPHY (Illustrated)—A. S. Crawford, M.D., Department of Surgery, University of Wisconsin.

Abstract: Objections to intraventricular injections of air as now employed. Possibilities of injections through cistern or spinal puncture discussed. Introduction of non-irritating fluid, opaque to X-rays, is advocated.

38. PREVENTION AND RELIEF OF PROLAPUS UTERI (Illustrated)—R. S. Cron, M.D., Milwaukee.

Abstract: Lacerations and weakening of pelvic floor the chief factor in prolapsus. Prevention possible by careful repair of obstetrical lacerations, better by episiotomy and immediate suture. Various operations devised to correct prolapsus. Report of two hundred patients relieved of prolapsus by interposition operation illustrates value of that method.

39. CINEMATOGRAPHI, PULMONARY TUBERCULOSIS.

Abstract: The film shows inception and progress of infection, formation of tubercles and the progress of gross pulmonary lesions. Experts who have seen this picture state that it is incomparably superior to other exhibits for interest and instruction.

Course for Radiological Technicians Established at Marquette University; Opens in September

Marquette University, in formally announcing a one year course for radiological technicians, is trying to meet a definite need frequently expressed to the faculty of the College of Hospital Administration by executives, physicians, and surgeons in the hospital field. This is the first formal announcement of the course, though it was given during the past year by way of experimentation, and the present curriculum worked out from our experience and with the active cooperation of the Milwaukee section of the American Radiological Society which had urged the University to estab-

lish the course. The course opens September 24th.

The course has the approval of the Radiological Society of North America and the American Roentgen Ray Society. These two societies have been active in the organization of the American Registry of Radiological Technicians, which is composed as follows: "A board of six shall be appointed, each member to serve for three years. There shall be two members of the Radiological Society of North America, one member of the American Roentgen Ray Society, one member of

the Canadian Radiological Society, one physician and surgeon recommended by the American Medical Association or American College of Physicians and Surgeons, and one representative of the American Association of Radiological Technicians."

ADMISSION

The requirements for admission to the course are two-fold: (1) Graduation from a four-year course in an accredited high school, or its equivalent as attested by examination; (2) graduation from a recognized school of nursing or equivalent training. By equivalent training shall be understood practice as a technician for at least two years under medical supervision. See general regulations regarding admission of special students.

CANDIDACY FOR A DEGREE

The courses for x-ray technicians may be counted as a year's residence and a year's credit toward the degree of Bachelor of Science to persons, who fulfill the requirements of admission to the University and prerequisite training for the courses in radiology and its related sciences. Students in the University with adequate scientific training, may elect these courses in their senior year. Graduates of schools of nursing, who are proceeding to the Bachelor's Degree, may also count these courses toward the degree of Bachelor of Science when the usual University requirements are complied with.

COURSES OF STUDY

The course of study for radiological technicians as outlined in the following pages, will cover one year of the full time of the student. The first semester will deal largely with the fundamental sciences of anatomy, physiology, physics, and pathology, with courses on radiological equipment and appliances. The second semester deals largely with the radiological technique procedures and therapy. Beginning in January, and extending until June 1, four hours each day for six days a week, will be given over to actual laboratory practice. Courses on the ethical and legal aspect of practice will also be given in the second semester.

COURSES FOR RADIOLOGICAL TECHNICIANS

First Semester

Physics R1. Elementary Physics. This is an elementary course in the physical properties of

matter with special emphasis on light, electricity, magnetism and radio-active substances.

Professors Kremer and Donaghey.

Physics R2. Radiological Equipment and Appliances. This course will stress the fundamental principles underlying all X-ray power plants, machines and appliances, including the deep therapy apparatus. Special attention will be given to the construction of this equipment and its efficient operation.

Special consideration will be given to the dangers incident to the operation of the equipment and to the necessary protective measures.

Drs. Geyer and Podlasky.

Physics R3. The Principle of X-Ray Technique. X-ray tubes, current, voltage, time and distance relationship, charting, machines.

Dr. Geyer.

Anatomy R1. Elementary Anatomy. This is an elementary course in anatomy, dealing especially with parts of the body of special interest to the radiologist; bones, joints, sinuses, organs. Surface markings and land markings.

Dr. Carey.

Physiology R1. General Physiology. A special course in physiology emphasizing structures and functions of special interest to the radiologist.

Dr. Beckman.

Pathology R1. Pathology. A special course in pathology emphasizing points of special interest to the radiologist.

Dr. Miloslavich.

Biology R1. A special course in biology of special interest to the radiologist.

Professor Menge.

Second Semester

Radiology R1. General Technique. (a) Standard positions, head, spine, sinuses, teeth, gastrointestinal tract, urinary tract, lungs, heart, etc. Localization of foreign bodies, exposure charts.

Dr. Geyer and Leo Massapust.

(b) Bones, joints.

Dr. Podlasky.

(c) Head injuries, sinuses, mastoids, teeth.

Dr. Geyer.

(d) Gastro-intestinal, preparation of patient, opaque meal and enema, sol. fr. demonstration gall bladder.

(e) X-ray of children, with comparative anatomy and development.

(f) Urinary tract pyelograms.

- (g) Obstetrics and gynecology. Dr. Crow.
 (h) Industrial x-ray. Dr. Podlasky.
 Radiology R2. Dark Room Technique.
 Mr. Massapust.
 Radiology R3. Special Problems.
 (a) Fluoroscope and fluoroscopy (5 hours).
 Dr. Geyer.
 (b) Lantern slides and photograph (4 hours).
 Mr. Massapust.
 (c) Marking and filing films and records (4 hours).
 Dr. Podlasky.
 Radiology R4. Radiological Therapy.
 (a) Cutaneous (7 hours). Dr. H. Foerster.
 (b) Deep (7 hours). Dr. Podlasky.
 (c) Radium (4 hours). Dr. J. P. McMahon.
 (d) Ultra Violet Ray. Diathermy.
 Dr. Podlasky.
 Radiology R5. Special Procedures.

Radiology R6. Laboratory Practice. Dr. Geyer.
 Students will spend four hours each morning six days a week during the month of June to May, inclusive, in the radiological laboratory of Milwaukee hospitals doing actual hospital work under direction and supervision. Hospitals cooperating in this work are the Sacred Heart Sanitarium, county hospitals, Mt. Sinai Hospital, St. Joseph's Hospital, and the University Hospital.

Ethics R1. Ethics. A brief course on the essential facts of mortality emphasizing both the ethics and etiquette, supplemented by a series of lectures on the special requirements of the Radiological Society and approved and disapproved practices that are developing.

Law R1. Legal problems incident to the practice of radiology for doctor and technician.

Dr. Trostli of Chicago.

Thoughts and Hopes of a Young Practitioner Starting His Career

THE HOPES AND TEARS AND DREAMS OF YEARS—BUBBLES ALL?—OR TRUE?

Editor's Note—The blue pencil has been used sparingly in editing the following article for publication. Here a young practitioner reveals his thoughts. They are worthy of careful consideration.

The reactions of a young medico are varied and interesting; fresh from four years of post-graduate hospital service in our large cities and abroad, dumped suddenly into the intimate strife of the daily grind of general practice in a small city of the middle west. For the first time in his life he meets the competition of good men; of some others whom he can not help but despise, and of quacks who demand as much respect from his clientele as his late professors might.

The first thing he wonders is why he did not happen to learn more about backaches, headaches, and rashes in children, and more about how to meet the critical eye of the old grandmother who is to be the judge of his work, rather than his chief of staff. But this fact fortunately more often works to his advantage than to his disadvantage. Only when the old grandmother casts a skeptical eye upon his methods in a hopeless case, it does seem so utterly unjust that his embryo reputation rests upon a judgment from such a source.

Looking into the future it would seem that we, of the younger generation, should have rather a

gloriously interesting time of it. Judging from the progress in the past fifty years of medicine, who can foresee what marvelous new instruments and agents of aid to our neighbor will surely be placed in our hands before we die? In this one year out we have a promising serum for scarlet fever, and on the horizon looms hope for a new chemotherapy for the great white plague, in much the same manner as our fathers welcomed a chemical agent for the scarlet plague. Surely we will live to see rheumatic fever conquered and mitral stenosis and rheumatic myocarditis placed among preventable diseases, and heart disease stricken from the head of the list as causes of death. We shall live to see toxic goiter become a rare disease, and perhaps cancer under control. Would not these things alone, and the appreciation they will arouse in our hearts, make our lives worth living?

What lesson has the thought of these coming innovations to teach our young practitioners not living in a medical center, only two of which exist in our state? Don't be afraid to leave your practice to study, to keep abreast, to make new and cement old medical contacts, to keep stimulated. The newer medical graduates from our high class medical schools have the privilege of such an infinitely better start in training and ideals than those a generation ago. But let them not fail to beware of the rut.

The younger medical generation owes a great

debt to the American Medical Association for the standardization of medical schools. It has given us a class of associates with whom it will be so much more pleasant and stimulating to work shoulder to shoulder than some our fathers met from the diploma mills. Knowledge and education begets tolerance and we ought to have less of the bitter rivalry, professional jealousies, and bickerings that often made life so bitter to our elders.

Another new factor we may well be grateful for is the automobile and the good roads that have made practice so much easier, and the education of the people not to call the doctor at night, except in real emergencies. In our lives we may not expect the bug-a-boo of long country calls of the last generation. Let us devote the extra time thus gained to making our practice more interesting by more carefully working up our cases, careful record-keeping, and each one to his little hobby of some research problem, preferably for such as us along some clinical observations in the manner of Sir James MacKenzie, a model for the small town doctor.

They tell us the day of the old family physician is passing and we may not expect to sit as of old in the family council of scores in our community. "Shopping" is the order of the day. Only so much more keen and interesting the fight. We shall win then by the accuracy of our diagnosis, by the infinite pains of our attention to details of treatment, and the kindness of our personalities.

We are told to beware of the trend toward social medicine. Those that cry out against it are least aware of the preventive. Let us sieze this bull (excuse the double meaning) by the horns and keep the trend in our own control and under our own guidance. We must learn to contribute some of our own time and money to certain social aspects of medicine, especially preventive medicine. Let our own local medical societies initiate and organize necessary clinics, above all keep them under local control. We must be the leaders in preventive and social medicine and not have it forced down our unwilling throats by possible bungling efforts of the public's law-makers. Children's clinics, pre-natal clinics, annual health examinations, venereal clinics, and heart and chest clinics will all some day be the demand of an enlightened public. Why can we not ourselves create this demand now and guide the movement

along those lines the least inimical to our own individualities and medical science, but nevertheless efficacious for the public good. In this generation the public is going to learn what the doctors can do for them if the doctors only would; then they will demand it one way or the other. We must stand ready to give it within our own organization, and not have politicians organize us to do it for them. Each one of these clinics will offer a health and medical education to the general public that will pay dividends to the public and to ourselves, to the ultimate discomfiture of all the cults. It will help to bring out the truth and no longer will the people be swindled by ridiculous frauds. These agencies will but advertise medical sciences as a whole if we run them right.

While it should ever be our policy to enlighten those in authority and the public in general on the truths of scientific medicine as opposed to the absurdities of the cultists, let us not in our worry concerning the latter forget our own doorstep. Frankly speaking there is evident too much surgery for the fee in our great Middle West. Side by side with the great movement for improvement in most of our hospitals according to the standardization program of the American College of Surgeons and the American Medical Association, one still sees existent and thriving some hospitals run on the gullibility and ignorance of our people. It is perfectly possible for any man possessing but a dangerous smattering of medical knowledge and no surgical training or judgment, nor diagnostic skill, but a keen sense of salesmanship, to sell his ignorant or dishonest diagnoses to the trusting public and mutilate their bodies; to surround himself with men of no training; to call them specialists and make the public believe it. This condition is the fault of our local societies. They can and should expose the charlatan but seemingly lack the courage and cooperation to do their duty.

To the new graduate, with his long years of expensive training, the untrained man in unregulated hospitals making unchecked diagnoses and operating or treating patients depending not on skill but powers of persuasion and salesmanship; all this seems a matter for strict adjustment by his colleagues. The public can not discriminate.

Plan on attending your college alumni luncheon on Thursday noon, September 17th, in connection with the Annual Meeting.

THE JOURNAL BOOK SHELF

- The Physiology of Mind.** An interpretation based on Biological, Morphological, Physical and Chemical Considerations. By Francis X. Dercum, M. D., Ph.D., Professor of Nervous and Mental Diseases in the Jefferson Medical College, Philadelphia. Second edition, reset. 12mo of 287 pages. Philadelphia and London. W. B. Saunders Company, 1925. Cloth, \$3.50, net.
- Safeguarding Children's Nerves.** A Handbook of Mental Hygiene. By James J. Walsh, M. D., Ph.D., Sc.D., Professor of Physiological Psychology, Cathedral College, and John A. Foote, M. D., Professor of Diseases of Children, Georgetown University Medical School, with a Foreword by Honorable Herbert Hoover. Cloth, price, \$2.00. Pages 272, with illustrations. Philadelphia: J. B. Lippincott Company, 1924.
- Report on Second International Congress of Military Medicine and Pharmacy.** By Commander William Seaman Bainbridge, M. D., Rome, May-June, 1923. Reprinted from the Military Surgeon.
- Diseases of the Heart.** By Henri Vaquez, M. D., Professor of the Faculty of Medicine of Paris. Translated and edited by George F. Laidlaw, M. D., Associate Physician to the Fifth Avenue Hospital, New York City. Introduction by William S. Thayer, M. D., Johns Hopkins Hospital, Baltimore, Md. Octavo volume of 743 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$8.50, net.
- Lectures on Pathology.** By Ludwig Aschoff, M. D., Professor of Pathologic Anatomy, University of Freiburg, Germany. Delivered in the United States, 1924. With thirty-five illustrations. Paul B. Hoeber, Inc., New York, 1924. Price, \$5.00.
- The Inheritance of Acquired Characteristics.** By Paul Kammerer, M. D. Boni and Liveright, Publishers, New York.
- Medical Education—A Comparative Study.** By Abraham Flexner, Secretary, General Education Board, New York. The Macmillan Company, New York City, 1925.
- Chemical Dynamics of Life Phenomena.** By Prof. Otto Meyerhof. J. B. Lippincott Company, Publishers, Philadelphia and London.
- A Manual of Diseases of the Nose, Throat and Ear.** By E. B. Gleason, M. D. W. B. Saunders Company, Publishers, Philadelphia and London.
- Insanity and Law.** By H. Douglas Singer, M. D., M.R.C.P. (London). Professor of Psychiatry, University of Illinois College of Medicine; formerly State Psychiatric Institute in Illinois; and William O. Krohn, A.M., M.D., Ph.D., author of Practical Lessons in Psychology; First Book in Physiology and Hygiene; formerly Resident Psychologist at Kankakee State Hospital; Head of Department of Psychology at Western Reserve University and at the University of Illinois; six years Medical Juror in Cook County (Chicago) Insanity Court. Cloth, pp. 437. P. Blakiston's Son & Co., Philadelphia, 1924.
- Pediatrics.** Vol. IV. By various authors. Edited by Dr. Isaac A. Abt, M.D. W. B. Saunders Company, Philadelphia and London.
- Text-Book of Pathology.** By William G. MacCallum, M.D., Professor of Pathology and Bacteriology, Johns Hopkins University. Third edition, thoroughly revised. Octavo volume of 1,162 pages with 575 original illustrations. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$10.00 net.
- How Is Your Heart?** Intimate Talks on the Prevention of Heart Disease and on the Care of an Already Damaged Heart. By S. Calvin Smith, M.S., M.D. Boni and Liveright, New York City.

BOOKS RECEIVED FOR REVIEW

International Clinics. Volume II. Thirty-fifth series, 1925. J. B. Lippincott Company, Philadelphia and London.

Diabetes and Its Treatment by Insulin and Diet. By Orlando H. Petty, M.D., Prof. of Diseases of Metabolism in the Graduate School of Medicine, University of Pennsylvania; and William H. Stoner, M.D., Associate Prof. of Biochemistry, Graduate School of Medicine, University of Pennsylvania. F. A. Davis Company, Philadelphia, Pa.

The Surgical Clinics of North America. Volume V, Number III. Mayo Clinic Number, June, 1925, 260 pages with 115 illustrations. Paper, \$12.00; cloth, \$16.00 net. W. B. Saunders Company, Philadelphia and London.

Medical Clinics of North America. Volume IX, Number I. St. Louis Number, July, 1925. Octavo of 275 pages with 67 illustrations. Paper, \$12.00; cloth, \$16.00, net. W. B. Saunders Company, Philadelphia and London.

A Compend of Diseases of the Skin. By Jay Frank Schamberg, A.B., M.D., Prof. of Dermatology and Syphilology, Graduate School of Medicine, University of Pennsylvania. Seventh edition, revised and enlarged, with 119 illustrations. Price, \$2.00 net. P. Blakiston's Son & Company, Philadelphia.

A Compend of Obstetrics. Revised and edited by Clifford B. Lull, M.D., Instructor of Obstetrics, Jefferson Medical College, Philadelphia; attending physician, Dept. of Gynecology and Obstetrics, Philadelphia General Hospital. Especially adapted to the use of medical students and physicians. Tenth edition, 84 illustrations. Price, \$2.00 net. P. Blakiston's Son & Co., Philadelphia.

Diseases of the Bronchi, Lungs and Pleura. By Frederick T. Lord, M. D., visiting physician, Massachusetts General Hospital; Instructor in Medicine, Harvard Medical School. Second edition, thoroughly revised, with the addition of a chapter on Pulmonary Tuberculosis. Illustrated with 107 engravings and 3 colored plates. Price, \$8.00. Lea & Febiger, Philadelphia and New York, 1925.

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Specify Elixir of Enzymes, a palatable combination of ferments that act in acid medium.

Also one of the best vehicles for iodides, bromides, salicylates and other disturbers.

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BOOK REVIEWS

WILLIAM A. MOWRY, M. D.,
Editor

Any scientific publication reviewed in this column may be obtained for inspection. Orders for such inspection should be directed to Mr. W. M. Smith, Librarian, Medical Library, University of Wisconsin, Madison, and should be placed through your local librarian wherever possible. Where there is no local librarian orders may be sent direct. These new books will be loaned for an inspection period only.

The Cornell Clinic, 1921-1924. Medical service on a self-supporting basis for persons of moderate means. A report issued by the Committee on Dispensary Development of the United Hospital Fund of New York, Michael M. Davis, executive secretary. April, 1925. New York City.

Our thanks are due the Committee on Dispensary Development of the United Hospital Fund of New York, Michael M. Davis, Executive Secretary, for a copy of the report of The Cornell Clinic, 1921-1924.

It has long been recognized that the vast majority of individuals, who, while self-supporting, are not able to purchase sufficient medical service at the usual private rates to care properly for more than minor or inexpensive sickness, are unwilling to be considered objects of charity.

This Clinic was established by Cornell University Medical College assisted by the above committee, in November, 1921, as a means of providing adequate medical service for people of moderate means.

Careful study of the report indicates that the establishment of such a Pay Clinic has been more than justified.

The relation of the Clinic to the medical profession at large is thoroughly discussed and may be read to advantage by all physicians.

All medical men and laity interested in Clinic and Dispensary work will find this report most instructive.
W. A. M.

Lectures, Clinics and Discussions on Electro-Physiotherapy. Held at Logan Square Masonic Temple, Chicago, October 20 to 24, 1925, under the auspices of H. G. Fischer & Company, Inc., Chicago.

This volume, of 730 pages, is the stenographic report of a physiotherapy meeting, held under the auspices of Messrs. H. G. Fischer & Co., in Chicago, October, 1924. It contains a good many original papers, and also reports of discussions. Most of the papers are very good, and all of them enthusiastic in their discussions of ultra violet irradiations, diathermy, and other physiotherapy modalities.

The authors, for the most part, produce rather convincing evidence of the values of physiotherapy when in competent and skilled hands. The dangers of over-enthusiasm are evident; but this newer adjunct to the usual surgical and medical armamentarium gives promise of real service in the therapy of selected cases.

The book is readable, and the content of the papers is varied and interesting.
J. C. E.

A Manual of Physical Diagnosis. By Austin Flint, M.D., LL.D., late professor of the principles and practice of medicine and of clinical medicine in Bellevue Hospital Medical College. Ninth edition, revised by Henry C. Thacher, M.S., M.D., attending physician, Lincoln Hospital and assistant attending physician, Roosevelt Hospital, New York. Illustrated. Price \$3.25. Lea & Febiger, Philadelphia and New York, 1925.

For many years this manual written by one of the great medical teachers of his time, has been an invaluable aid to countless students and practitioners.

First published at a time when clinical diagnosis was almost dependent upon the thoroughness and skill of the examiner, it has always stressed simplicity and exactness in dealing with physical signs in health and disease.

As the editor states in his preface to this edition, additional emphasis has been placed upon inspection and palpation in response to the request for a more complete text-book for the beginner; also that portion of the work devoted to the cardiac arrhythmias has been carefully revised with the addition of newer concepts of these important conditions.

This small volume can be heartily recommended to students and graduates alike for brevity and simplicity in the presentation of the cordinal points of physical diagnosis.
W. A. M.

Medical Clinics of North America. Boston Number, May, 1925. Volume VIII, Number VI. Octavo of 278 pages and 47 illustrations and complete index to Volume VI. Paper, \$12.00; cloth, \$16.00. W. B. Saunders Company, Philadelphia and London.

This volume contains a pleasing variety of subjects of interest to the general practitioner. The authors do not adhere solely to text-book descriptions of the various diseases, but present many case reports in order that the reader may become familiar with the variations which so often occur.

The contribution by Dr. Joseph H. Pratt on "Gout" is well worth reading. He feels that this condition is more prevalent than is supposed. He also states that "the importance of gout in the etiology of olecranon bursitis, as well as the importance of olecranon bursitis in the diagnosis of gout, have not been generally recognized." The bibliography is large.

The article by Drs. Elliott P. Joslin, Howard F. Root, and Priscilla White on "Diabetic Coma and Its Treatment" presents the subject in a very thorough manner. They discuss the factors which brought about coma in 48 cases, the various symptoms presented, and the method of treatment worked out by them. Of 83 cases treated with insulin they lost but two. The treatment is explained in detail.

The last article, "A Death from Diabetic Coma and Why," should be read by everyone interested in the treatment of disease, particularly physicians and hospital superintendents. The explanation of "Why" is forcefully written.
R. B. M.

Surgical Clinics of North America. New York Number, April, 1925. Volume V, Number II, 337 pages

MADISON NEUROLOGICAL CLINIC

First Central Building
Madison, Wisconsin

The work of this Clinic is limited to neurology, psychiatry, syphilis, cardiac and endocrine disorders.

The service is both diagnostic and therapeutic.

Syphilis in all its phases, especially late manifestations and syphilis of the central nervous system, will be treated. Limited hospital facilities for this purpose are available at Madison.

Metabolic and cardiac disorders will receive special attention.

Our diagnostic service includes psychoneuroses, psychoses, conduct and behavior disorders in children.

The Clinic is equipped to render special service in the following diagnostic methods:

SEROLOGICAL examination
DARK FIELD examination
LUMBAR PUNCTURE
ELECTROCARDIOGRAPHY

BASAL METABOLISM
CARDIAC FLUOROSCOPY
BLOOD CHEMISTRY
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After careful study, a complete detailed report with conclusions and suggestions for treatment will be submitted to the physician who refers the case.

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F. J. HODGES, M. D.
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The Management of an Infant's Diet

Summer Diarrhea

The following formula is submitted as a means of preparing suitable nourishment in intestinal disturbances of infants usually referred to as summer diarrhea:

Mellin's Food	4 level tablespoonfuls
Water (boiled, then cooled)	16 fluidounces

This mixture contains proteins, carbohydrates and mineral salts in a form readily digestible and available for immediate assimilation.

The need for protein is well understood as is also the value of mineral salts, which play such an important part in all metabolic processes. Carbohydrates are a real necessity, for life cannot be long sustained on a carbohydrate-free diet. It should also be stated that the predominating carbohydrate in the above food mixture is maltose—which is particularly suitable in conditions where rapid assimilation is an outstanding factor.

Above all is the satisfactory result from the use of this suggested nourishment, which is well supported by clinical evidence.

Mellin's Food Co., 177 State Street Boston, Mass.

with 105 illustrations. Paper, \$12.00; cloth, \$16.00 net. W. B. Saunders Company, Philadelphia and London.

An article of interest in this number is one by Dr. De Witt Stetten in which he describes his method of cholecystectomy without drainage. The gall-bladder is dissected from above downward. The peritoneum is divided one-fourth inch from the liver border and a triangular flap is cut in the peritoneum just over the place where the cystic artery and cystic duct are to be severed. After ligation, the stump of the cystic duct is cauterized and the flap sewed over it onto the liver. The remainder of the wound is closed in the usual manner. No drains are used.

In a series of 50 cases there has been primary union in all. He states that the contra-indications to closure without drainage are severe infection, marked oozing of the liver bed, a friable cystic duct, imperfect or unsatisfactory ligation of the cystic duct, and choledochotomy.

R. B. M.

Personal Hygiene Applied. By Jesse Feiring Williams, M.D., Prof. of Physical Education, Teachers College, Columbia University, New York City. Second edition revised. 12mo of 414 pages, illustrated. W. B. Saunders Co., Philadelphia and London, 1925. Cloth, \$2.00, net.

Dr. Williams has handled his materials very judiciously in this revision of his text on personal hygiene. His approach from the biologic and psychologic viewpoints is most logical, although it would appear tediously carried out to the medical reader.

Exception is taken to the statement of the "insignificant value" of the Eugenic Marriage Law in Wisconsin. True, evasion is easy; but the very knowledge of the law's existence is educational, and in the reviewer's experience a conscientious adherence on the part of the applicant is the rule. We are not agreed that "blood tests" rule out syphilis, but it is our practice to obtain urethral smears by prostatic massage as well as blood Wassermann. The implied indictment of Wisconsin physicians is unfair. The utopian idea of mating only the "strong types" is unbiologic. Analyses have failed to reveal the basis for the attraction between different types, but surely education will do but little to break down the trend of the ages.

The author's attitude toward Christian Science and the various cults is finely analytic. His dispassionate arraignment is worthy of notice. No one could read these passages without conviction of the fallacy of such unscientific procedures. He gives nostrums no quarter.

The reviewer cannot subscribe to the uncontrolled statement of work to strengthen a "weak heart." Furthermore the position that violent exercise is incapable of inducing cardiac injury in the normal heart is difficult to defend. However, the assumption of an infectious responsibility in the existence of a focus of infection or some mild disease at the time of the effort covers many of the instances of this nature. Only the most exhaustive study can determine the body to be "free from infection;" and granting the custom of very careful cardio-vascular examinations to protect our

athletes, the thesis expounded by Dr. Williams would exact much more inclusive studies of all participants in serious athletic endeavor.

The text includes sections on the hygiene of the several systems. Those dealing with the muscular system and nutrition are especially well organized. Preventive measures in relation to communicable, nutritional and functional diseases are succinctly considered. The text is worthy of a wide circulation not only among the laity and educators, but among medical men as well.

W. S.M.

Clinical Medicine for Nurses. By Paul H. Ringer, A.B., M.D., Chief of Medical Service of the Asheville Mission Hospital, Asheville, N. C.; on staff of Biltmore Hospital, Biltmore, N. C. Illustrated. Second revised edition. Price, \$2.50. F. A. Davis Company, Philadelphia, 1924.

The material in this volume is very clearly and concisely presented.

Bacteriology and pathology are lightly dealt with but the symptomatology which precedes the study of the various groups of diseases will be found useful not only in increasing the knowledge of student nurses, but also a real aid in cultivating and improving their powers of observation.

C. M.

A Textbook of Practical Therapeutics. With special reference to the application of remedial measures to disease and their employment upon a rational basis. By Hobart Amory Hare, B.Sc., M.D., LL.D., Prof. of Therapeutics, Materia Medica, and Diagnosis in the Jefferson Medical College of Philadelphia. Nineteenth Edition. Enlarged, thoroughly revised and largely rewritten. Illustrated with 144 engravings and 8 plates. Price \$7.00. Lea & Febiger, Philadelphia and New York, 1925.

Dr. Hare states in his preface to this greatly enlarged edition that the effort has been made to make the text as it stands today as up to date as if the book had been published for the first time in 1925.

When one considers the great changes and advances made in therapy since the first edition was published—the many drugs which have been dropped from the U. S. P. or transferred to the pages of the National Formulary, the deepest appreciation is due the author for his painstaking work for so many years in preparing new editions of this valuable and popular work.

In this latest edition, numbers of new drugs and remedies are fully described and their use considered under appropriate diseases. Insulin is reasonably well covered, new concepts of iodine therapy in thyroid condition discussed and to the field of analgesic and hypnotic drugs have been added most of the newer synthetics.

Hare's Therapeutics needs no recommendation—the fact that the Nineteenth Edition is presented is more than a recommendation.

W. A. M.

The discussions of our socio-medical problems at the Annual Meeting will be open to all our members. Those who contribute will help to form the medical opinion of the state.

The Wisconsin Medical Journal

Volume XXIV

MILWAUKEE, SEPTEMBER, 1925

Number 4

Surgical Diathermy in the Treatment of Malignant Lesions of the Buccal Cavity and of the Skin*

BY FRANCIS B. McMAHON, M. D.,
Milwaukee.

Surgical diathermy or surgical endothermy includes electrodesiccation and electrocoagulation. They are surgical measures for the local application of heat, which have a destructive action on tissues or cells. This heat energy is delivered by alternating currents of high frequency to a local part of the body and due to the resistance offered by the cells or tissues at the area of application, electric energy is transformed into heat energy of sufficient intensity to destroy the cells. The electrodesiccation method is produced by a monopolar high-frequency current of relatively high voltage and a low amperage. It produces a heat that desiccates or dehydrates tissue cells. It is limited in its use to the destruction of small and superficial lesions. The electrocoagulation method is produced by a binolar high-frequency current (D'Arsonval) which has a more penetrating and intense action, employing a pointed or a blunt active metallic electrode which is placed within the tissue to be destroyed or at least in immediate or direct contact with the lesion. The heat developed within the tissues is thereby formed by the resistance to the electrical current offered by the tissues or cells acting as the conductor or carrier. The degree and depth of penetration and destruction of tissues or lesions are regulated by the size and the position of the active electrode and by the strength and quality of the current and the time or length of exposure.

Electrocoagulation and electrodesiccation are of proved value in the treatment of certain chronic inflammatory and neoplastic diseases of the skin and accessible mucus surfaces and at times lesions of the bony structures and is a valuable addition to any surgical methods of attack in selected cases, either as an adjunct to or a substitute for other operative surgery, X-ray and radium therapy. Not even an enthusiast should use any one method to the exclusion of other proved methods,

*Presented in part before the State Medical Society of Wisconsin, August 20, 1924.

nor try to make the disease or the lesion adaptable to the method instead of the method of choice in attack adaptable to the lesion. Surgical diathermy is not a cure-all. In cases adaptable to this method of attack or else necessitating it as a substitute, the same principles of physiology, pathology and anatomy are present to confront us. In fact, in the majority of cases to date, the pathology is more advanced and extensive, the lesion is old and the host is frequently senile. Many cases have had one or more operations or have failed to respond completely to ray therapy. Successful treatment of malignant disease anywhere and with any method will depend upon early diagnosis and surgical attack by one of many approved methods or a combination of them.

Electrocoagulation is a major surgical procedure and should be looked upon as such. It is simplified in being practically a bloodless operation, and it has the advantage of sealing and blocking lymphatics before the tumor is removed. It has many contra-indications as well. This method is very adaptable to the treatment of certain malignant cutaneous lesions and malignant lesions within the oral cavity, the lip, the cheek, the tongue, the floor of the mouth, the palate, the antrum and the alveoli. Many of the cutaneous malignant lesions yield to some form of ray therapy. There are, however, a certain group of cases that present themselves late in the disease that do not respond completely, if at all, to ray therapy on account of the size and duration and prolonged irritation. There is another group that after a time do not react favorably to ray treatment and either remain stationary under the treatment or the disease extends despite it.

With sequellae of radio therapy in the cutaneous margin and persistence or recurrence, the lesion should be coagulated or excised. These cases may respond to electrocoagulation by destroying the visible lesion and marginal areas, and waiting for granulation and epithelization to occur.



FIGURE I

Recurring carcinoma left breast that resisted roentgen-therapy but held in check fairly well by it. Four years period since amputation. July 17, 1924, electro-coagulation with wide destruction of margins and extending down to periosteum of ribs and manubrium. Sept. 27, 1924, removal portion of ribs and currette manubrium for necrosis. Skin graft to clean granulating areas. Oct. 21, 1924, skin graft to remaining areas. Jan. 24, 1925, excision small ca. nodule skin right pectoral fold.

Squamous cell carcinoma (prickle-cell) is a very serious* affection. If the lesion has become indurated, ulcerated, badly infected or has invaded



FIGURE II

Same as Fig. 1. March 25, 1925. Four small areas, denuded bone exposed. No recurrence. Local and general condition very good, 8/1/25.

the deeper skin structures or the subcutaneous tissues, results are surer and better with some form of destruction or excision. A very small percentage of these late cases will respond to other than surgical excision or deep heat destruction. Many authorities are convinced that any well developed prickle celled carcinoma of the skin or the mucosa is a surgical disease and should be excised or destroyed, together with the regional lymph glands. Pre and post-operative x-ray therapy are advisable, including the regional lymphatic areas.

There are several reputable manufacturers of high-frequency apparatus whose products are suitable for this work. The difficulty is not so much in the choice of the make or model of a machine,



FIGURE III

Squamous carcinoma skin involving cartilage left ear of long standing and radio resistant. Electro-coagulation under local anaesthesia Aug. 4, 1924. Excision and cautery margins and depth for recurrence Nov. 26, 1924. Cautery with radio knife for recurrence Jan. 7, 1925. Probable recurrence. Patient has not been traced.

but in the indications for and the application of these methods in surgical practice. The dangers in this method of treatment are from either under treating or over treating a gross lesion, and the further difficulty encountered is that which is present in attacking a local malignant lesion by any method; namely, estimating the probable depth of cellular invasion that is present, and to what extent important adjoining anatomical structure

will be effected or exposed by this method of destruction or excision.

Since here we frequently have not the exposure that we are accustomed to having in ordinary surgical procedure, I look upon the coagulation method of surgical attack in malignant lesions as a two-edged sword, capable of doing a lot of good in well trained, experienced hands and of doing much to discredit all surgery and particularly this method of surgical attack if employed promiscuously without knowledge of pathology of the lesion, local and remote, and a thorough knowledge of the topographical anatomy of the part involved. The hope and object of attacking a lesion with surgical diathermy should always be to destroy it with the initial treatment, rather than with divided or repeated treatments. Many of these lesions, however, are of long standing and extensive, of varying degrees of activity or malignancy, located or extended into places that are not easily accessible or surrounded by anatomical structures that are important or dangerous to either destroy or to leave exposed after the slough comes away.

We shall, therefore, always have a varying percentage of recurrences depending on these factors and the additional factors of experience and courage and judgment of the surgeon. These recurrences should be looked for and recognized early and promptly treated in like manner if deemed advisable. Microscopic examinations of suspicious areas are of much more value than the policy of watchful waiting and masterful inactivity. Be alert for delayed healing, an abnormal amount of purulent discharge from a wound that should be kept clean by any of the ordinary dressings after the coagulated tissue has been removed or separated, unless bone sequestra are present, an island or area of pale or grayish tissue that either undergoes central necrosis, rapid nodular elevation or peripheral extension in the base of the wound, a localized, delayed granulation and epithelial regeneration in an area of the margin of the wound of a cutaneous or a mucus lesion and the reappearance of pain that is not explained by the ordinary inflammatory reaction of an open or unhealed lesion, unyielding muscular fibrosis, contractures, neuritis and other ordinary factors. These are the principal objective and subjective findings in recurrences and complications to be apprehensive of. The usual time of appearance of recurrences vary from three to eight weeks after operation.

Excision en bloc of regional lymph glands draining a malignant lesion should be advised routinely unless there is some contra-indication. Enlarged lymph glands do not contra-indicate operation, and absence of palpable regional lymph glands gives no assurance that there may not be glandular involvement. I have frequently done much of the block excision of glands with the knife electrode, regulating the current so that it acted as a cutting apparatus. It is probable that the radio-knife will prove a better method of excision as it permits closer dissection around large vessels and nerves without injury and insures better wound healing. I have employed the radio-knife for excision

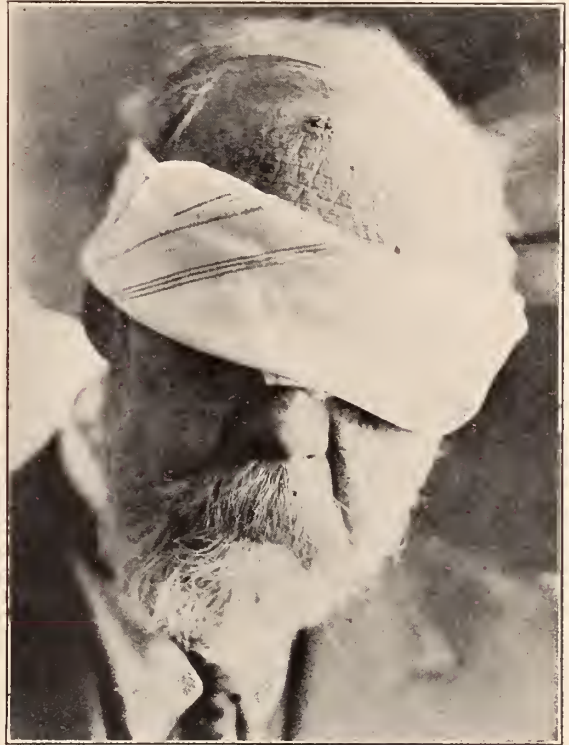


FIGURE IV
Squamous carcinoma right forehead and left cheek. Electro-coagulation under local anaesthesia, April 10, 1924. No recurrence.

around important structure more recently with very much more safety and with more accuracy than any other method affords.

Malignant lesions of the mouth are very common and also very fulminating or rapid neoplasms, and tend to metastasize fairly early on account of the rich blood and lymph supply and because of the mixed infection and the activity of its muscular structures. In a group of 774 cases of carcinoma of the oral cavity collected from a number of sources it was found that only 43 cases were re-



FIGURE V

Early squamous carcinoma lower lip superimposed on a leukoplacia. Negative Wassermann. Electro-coagulation under local anaesthesia July 8, 1924.

ported as clinically cured after three years. Some of these had no surgical intervention and others had surgery and ray therapy. Surgical treatment of squamous cancer of the lip was favorable, but



FIGURE VI

Same as Figure V on Feb. 25, 1925. Wound healed in four weeks.

still very alarming. Broder's report on 537 cases of squamous cancer treated surgically at the Mayo Clinic showed 22 per cent died of recurrence. The glands of the neck were removed in 87 per cent of this series, and 23 per cent showed glandular involvement.

Now, unfortunately, most of these cases come late in the disease with large ulcerations, mixed infections and deep invasions, and probably glandular involvement. Possibly any favorite choice of treatment of these lesions, especially cutaneous and lip lesions if gotten early, may be cured. But if wide and extensive ulceration is present, the results have been disappointing in a



FIGURE VII

Squamous carcinoma. Four weeks' history in site of old scar following resection portion lower lip elsewhere nine years prior for carcinoma. Glands of neck removed at that time. No adenopathy present now. Feel that this is a new lesion rather than a recurrence of an old one.

Electro-coagulation lip lesion under local anaesthesia. April, 1924. No recurrence to date of publication. Wound healed in four weeks.

large number of cases under ray therapy, and valuable time is lost in which heat destruction might better be employed and then followed by ray therapy if advisable.

The choice of anaesthesia is no different than in any surgical operation. Much of this form of surgical attack can be done under local anaesthesia by blocking the nerves at or near their sources or



FIGURE VIII
Papillary carcinoma of skin over right mastoid area and extending up onto ear of a year's duration. Electrocoagulation of the tumor mass and wide excision of the margin and base with radio-knife under local anaesthesia Feb. 24, 1925. Skin graft two weeks later.

by infiltrating around the lesions but away from any infected area. Large lesions requiring prolonged operations may be carried out better under combined or gas anaesthesia in order that the discomfort of an incomplete blocking or the intercessions of an apprehensive patient do not interfere with performing a thorough destructive operation of the neoplasm. Where ether is used the container and the ether mask must be removed from the room before the work is begun and the apparatus disconnected during all the times ether is being administered. All the operating room personnel should be forewarned and impressed with this fact. The amount of ether concentration in the exhaled air is not dangerous in working with surgical diathermy in lesions of the oral cavity. Local surface applications of alcohol and iodine must be evaporated before the current is introduced or applied in the operative field.

Another important point is the attention to be given in seeing that the skin in contact with the indifferent electrode is thickly soaped. Where the operation is prolonged, this electrode should

be remoistened with a thick liberal emulsion of soap. This precaution is especially important if the patient has a general anaesthetic and, therefore unconscious to the sensation of heat or burning at the contact area of a dry electrode.

The pathology and clinical subjective and objective findings of skin and buccal cancer are fairly well known. The differential diagnosis is not always certain, however, without microscopic examination of suspected tissue as well as serological tests. In cutaneous lesions the trained dermatologist should be our greatest aid in making or confirming a diagnosis and also to advise in outlining treatment.

The dermatologist who sees so many of these



FIGURE IX
Same as Figure VIII two weeks after skin graft and four weeks after primary operation. Wound healed. No recurrence to date.

cases can tell from his experience which cases may expect good results from ray therapy and which cases will not respond to anything except heat destruction. Often times a fair trial with conservative treatment is advisable providing the patient can be carefully followed and observed, and you are reasonably assured that there is not an invasion of the deeper strata, although the surface of the lesion and the margin appear improved under

treatment. The local malignant lesions within the oral cavity, however, are surgical problems as soon as a correct diagnosis is made, and unless advanced beyond hope, should be attacked with some form of heat destruction in which electrocoagulation is a method of choice, although the Percy cautery and the soldering iron have also been used to good advantage.

Palliative local operations of most of the lesion, followed by ray therapy, may convert a hopeless case into one with some possibilities. Electrocoagulation for the mere relief of odor and pain is scarcely justifiable for they soon recur in the presence of a persistent malignant ulceration.

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See page 194 for discussion.

How to Better Our Cancer Results*

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How to better our cancer results is the object of this communication. That our results need betterment there is not the scintilla of a doubt. How to do it is the problem. The fact that nearly 100,000 people die from cancer in the United States yearly, most of whom are in good health and in the prime of life, is appalling enough; but when it is realized that nearly half of these people could be saved from untimely death from cancer, indignation becomes exasperatingly acute. How can 40,000 to 50,000 be saved? By applying what we already really know about cancer. It has always seemed necessary in the study of disease to begin at the terminal end and work forward. Cancer is no exception to the rule; and we are still working hardest at the wrong end, or at best not far from the middle. As disease is only manifest by symptoms and signs, it is essential that they present themselves before identity can be established. These symptoms are natural phenomena governed by natural laws. Advanced disease is, as we know, easily diagnosed. The nearer we get to the initial pathology the more difficult the task; and more difficult still is the anticipation of the advent of disease. Present day conceptions of disease are too narrow. Undue attention is paid to instrumental methods of investigation of disease, well nigh to the exclusion of the human vital factor. The sick person is too much a case instead of an individual.

Patients should be studied more than tested. They are biologic problems, individually modified, and investigation should include their antecedents. Scientifically trained physicians, practicing in the smaller cities over a considerable time and coming

in contact with families for many years, have an opportunity for research along these lines of incomparable value. Accretion to our knowledge of the pathogenesis of a disease and results of treatment in a comparatively limited number of cases well-disciplined would transcend in human benefit the labored and unrelated statistics of the metropolitan hospital. This appeals to me as so very applicable to cancer that I consider it the only solution. A broader concept of this disease must be taken. The results of the observations of the older clinicians, of the laboratory worker, of the operating room, of the laborer in the field, and of the clinician of today should be correlated. It is manifestly impossible to present even a resume of this material at this meeting, consequently only those features that seem paramount for the occasion will be recognized.

Although our country is comparatively young and made up of a diversified population, much information of value can be culled regarding cancer antecedents. The cancer disease being of great antiquity and its prevalence greatest in the older people in old civilized countries, it naturally follows that to these fields we must turn for intrinsic study of cancer in the broadest sense. In many of the cities and thickly populated sections of the older civilizations there exist over long periods of time cancer houses, cancer families, cancer streets and cancer districts in the same environs.

In England cancer is more prevalent in the southern and eastern counties, less so in the north-western and northern counties and in Wales. I wish to call your attention to the recent investigations of the famous epidemiologist, Dr. Louis Samban, published in the *Journal of Tropical Medicine*, London, June 2, 1924. He considers can-

*Presented at 78th Annual Meeting, State Medical Society of Wisconsin, Green Bay, August, 1924.

cer from an epidemiological standpoint; he studies those regions where cancer is rare and those where it is prevalent. Those who know anything about epidemiology and parasitism in certain communicable diseases are familiar with Sambon's previous work. Sambon has recently turned his attention to cancer. At the Pasteur Centenary Celebration in France, May, 1924, Sambon met Dr. George Ghetti of Faenza, Italy, who told of the extraordinary prevalence of cancer in Romagna. "Might it not be possible," Dr. Ghetti asked, "for the better financed British investigators to avail themselves of the exceptionally favorable circumstances presented by the province of Ravenna and Forli for an intensive study of the cancer problem?" A joint investigation by British and Italian physicians was arranged with Sambon in charge, the Italians supplying the material, including use of hospitals, laboratories and cooperation. For many years Ravenna and Forli have held the unenviable reputation of having of all Italian provinces the highest death rate from malignant disease. The average mortality in Italy, as a whole, is 1 per 1,500 population; in Romagna, 1 to 500.

In the hospital of Faenza, serving town and territory of 40,000 population, cancer represents one-third of all chronic affections admitted, and in the community the mortality due to it is double that of tuberculosis. In Romagna not only the physicians but the people are obsessed by the cancer terror. Almost every physician reported cases in his own family. In certain sections of a town there is little cancer while in other sections of the same town, a few blocks away, cancer is almost universal, although it is not so densely populated. Professor Ortala of Ravenna reports that in the village of Mezzano, a mere conglomeration holding about 1,500 inhabitants, cancer is found in almost every family. Cases of cancer in two or even three members of a family, of master and servant, of master and dog, cat or hen are mentioned. Dr. Chiadina of Forli states the great prevalence of cancer in the parishes of Romiti, Villagroppa and Castiglione; it is unknown in the adjoining parish of San Varano, at least not one case has been seen or heard from for the last fifteen years.

CANCER BELTS

Cancer belts are continually being discovered and behave much as goiter belts. Sambon states that not only does cancer show well marked varia-

tions in its topographical distribution, but notwithstanding the occasional increase in certain localities, and the total disappearance in others, the relative frequency of local incidence shows that remarkable persistence which is characteristic of the "foci" or "stations" of well-known endemic diseases such as malaria, leprosy and pellagra.

Inequalities in the topographical incidence of cancer have been reported throughout the world, yet this phase of the problem has received little attention. To my mind these reports are of the greatest importance and strongly support the infectious nature of the disease. Properly investigated they should lead to the elucidation of the etiology of cancer. It is my intention to visit some of these cancer zones in the very near future, not that I expect to discover anything new, but for my own satisfaction.

Physicians, practicing in cancer zones, do not consider cancer directly contagious, but acquired through some intermediate agent which accounts for the unequal topographical distribution of the disease. The fact that the long repeated invariable experience of large hospitals in which numerous cancer patients are constantly under treatment and no evidence of direct communication of cancer to surgeons, nurses or attendants, is no criterion that the disease is not communicable. In the face of our latest investigations we would not expect it, the intermediate host being lacking.

We can live with the malarial patient with impunity provided the *Anopheles* mosquito is excluded, and we can live with the *Anopheles* mosquito (less comfortably perhaps) if he has not previously sucked the blood of a person suffering from malaria. This is just the logical conclusion that the study of Sambon's investigations leads to. He had already begun to study rats, cockroaches, meal-worms, and bed-bugs in London and neighborhoods with cancer in view. He assumed a relationship between human cancer and cancerous diseases of dogs, cats, mice, rats and other animals whose domestic habits bring them in touch with man.

In all instances where cancer was markedly prevalent, in cancer houses, districts or belts, infestation by house vermin was evident even with cursory inspection. Invariably the common cockroach was found; meal-beetles, meal-moths, cellar-beetles, mice and rats were also frequently observed. Be reminded that Fibiger regularly produced car-

cinoma of the stomach of rats by feeding them with cock-roaches infested with nematode worm. Borrel in 1906 incriminated *Cysticercus fasciolaris* as a cause of sarcoma of the liver in rats and mice. Even to mention the investigations along this line would consume more time than is allotted to this paper, and yet these observations pass almost unnoticed in current literature and contributions presented at medical meetings.

The last generation has bred a class of oncologists who have so persistently taught that neoplasms were dependent on perverted cell growth from inherent intrinsic causes that the suggestion of an extrinsic etiology in the form of an infection is considered rank heresy. That is to say they teach that chronic irritation applied at one spot will so influence cellular tissue as to bring about cancer without the interposition of a specific organism. There is no question but that trauma or irritation plays an important role. Irritation must be of a specific kind. The term "irritation," as usually understood, has no significance at all as a cancer producer. There are so many more irritants that do not produce cancer as compared with those that have carcinogenic power, that the discussion of chronic irritation as a cause of cancer is meaningless verbiage. Sandpaper a rabbit's ear daily for a few weeks and we produce a sore which heals readily soon after the irritation is removed. Paint a rabbit's ear for the same length of time with coal tar and we get cancer. Why?

PRODUCTS OF INFECTION?

I have been collecting, classifying, filing, and studying cancer literature for many years with no preconceived notion of my own, nor with any idea of fostering a pet cancer theory. As a result I am firmly convinced that epitheliomas, carcinoma and sarcoma are products of infection of some form or forms. Infection is used broadly as a term for sake of brevity. The parasitic or infective theory has never been abandoned, but rather has been shunted by the shock of these on-coming cell proliferants. Experienced clinicians, scientifically trained, and broad-minded investigators have built up a foundation indicating the etiological significance of infection. This has been very noticeably in evidence the last few years; not that any special germ has been incriminated but there is no getting away from the growing conviction that outside influences gain entrance at vulnerable

places in a predisposed individual and incite a riotous cell growth which we call cancer.

That there is a constitutional predisposition is self-evident. The stamp of cancer begins aggressively at middle life and gains frequency as age advances attacking those in good health, who have always been well, been good livers and over-nourished, the type that develops arterio-sclerosis and diabetes. Tuberculosis diminishes the predisposition to cancer, but syphilis increases it. In fact many syphilitic lesions are precancerous.

Experimentally, cancer can be produced at will. It can be grown, transplanted, and grafted, but no experimental cancer has been transmitted to offspring. Rare spontaneous cancers, such as carcinoma of kidney or liver in mice, have been inbred so that a large percentage of offspring showed cancer of these organs. The investigations into the transmissibility of spontaneous cancer points clearly to an hereditary tendency to cancer. Hereditary predisposition to infections has also been demonstrated. The time limit only prevents me from going into this matter further. Suffice it is to say these are biological truths amply proven by best authority.

The pathologist has taught us much regarding the manifestations of cancer in the tissues and in the avenues of advance. From animal experimentation we have learned many other things; but the results so far, as preventing or curing cancer, are disappointing. Microscope gazing and Burbanking are all right in their way but are not curing cancer. We have been following the pathological guide too consistently, thereby losing proper perspective.

PRIMARILY LOCAL

As our therapeutic resources are now constituted we must regard cancer as primarily a local disease amenable to local removal. We should know the carcinogenic factors, precancer conditions and early cancer. These conditions are clearly recognizable by those who know cancer.

To my mind syphilis has certain features that typify cancer. First, the inoculation at a spot favorable to the reception of syphilis virus. The spirochete takes lodgment and develops the hard chancre. It takes a certain amount of time for the local infection to mature as it were before systemic invasion occurs. If the local lesion is excised before the blood stream is reached constitu-

tional syphilis will not result. Of course we appreciate that the syphilitic process operates much faster than cancer. Cancer infection grows slowly, from the initial lesion as it permeates along the lymphatics to the lymph nodes. Effective dissemination by the blood stream does not occur until late, if at all. Syphilitic infection, on the other hand, enters the blood stream early and is rapidly carried to all parts of the body when at favorable sites metastases or manifestations occur. The toxic symptoms of syphilis are seldom marked, rarely discernable, and often absent. Syphilis is lethal owing to metastases or manifestations in vital organs.

Cancer, in a like manner, is essentially non-toxic and kills by virtue of original involvement of vital organs or metastasizing thereto. Cancer of the breast never kills as long as it is in the breast but owing to the limited lymph node defense, it early disseminates far and wide to vital organs. Cancer of the bowel disseminates slowly owing to the early block by the lymph nodes. Cancer of the uterus soon reaches the adjacent lymph glands, does not metastasize widely and kills by ureteral obstruction or secondary pyogenic infection.

What is the best treatment to apply first? I am talking about initial cancer. Cancer begins in one spot and extends centrifugally along the lymphatics in all directions, against as well as with the lymph stream, but with the flow most readily. There is hardly any appreciable lymph current. The lymphatic vessels are invaded by cancer cells step by step until a lymph gland is reached where there is a marked pause and the advance of the process is hindered. For practical purposes we can ignore the blood stream as a means of dissemination.

HOW TO ACCOMPLISH ERADICATION

We wish to accomplish eradication and during this act every consideration should be given to the possibility of aiding dissemination of cancer cells. Therefore, all manipulations of the lesion should be avoided. The cutting removal is perhaps most frequently resorted to but it is the worst procedure. Why? Because there is more handling and scattering of the mass of cells. There is dissecting to do thus exposing fresh surfaces of vulnerable tissue. Bleeding occurs requiring sponging, clamping and tying. If lymph nodes are ex-

posed, they are cut, dug or pulled away. In fact, everything is done that should not be done in successful cancer surgery. Cutting operations have been done most thoroughly and skillfully by competent surgeons and yet the cancer death-rate proceeds to climb. A glance at the situation should convince anyone that cold steel is not the best way to remove cancer.

Before the Section of Surgery of the British Medical Association in Portsmouth, July, 1923, Mr. Herbert J. Paterson of London read a paper entitled: "Are the Results of the Operative Treatment of Cancer Better than Twenty Years Ago?" I am going to take the liberty of quoting freely from his paper. He says, "I imagine that there are few of us who do not feel depressed at the poverty of our success when we reflect how small is the number of cases in which complete freedom from recurrence follows operation for cancer." He calls attention to the extent that primary mortality has been reduced, but he goes on to say, "from the point of view of remote results have we similar cause for satisfaction? I look in vain for any convincing evidence that the proportion of ultimate successes is greater than was the case twenty years ago. Paterson cites the Registrar-General's returns which show that during 1921, of each million people living 1,215 died of cancer, as compared with 828 per million in 1900; an increase of nearly 30 per cent. Even granting that cancer is on the increase, that death certification is more accurate, it is not easy to understand this proportional increase if modern operations have effected the cures which are claimed. A comparison of operative statistics seem to point to the same conclusion. Most of us have had isolated cases of freedom from recurrence for ten or even twenty years, but on the whole the proportion of those free from recurrence after five years appears to be about the same as it was twenty-five years ago. When I was a house-surgeon, I traced the results of the operation for mammary cancer performed by my chief, the late Mr. Alfred Willet. I found that 42 per cent of the patients were free from recurrence after three years, and 33 per cent after five years. In 1902, Mr. Thomas Bryant published a series of cases showing 50 per cent free from recurrence after five years and 32 per cent alive and well after ten years. It is not without significance that both

these surgeons practiced what today would be considered a very inadequate operation. The axilla was not cleared out as routine measure, but only when there was evidence that the glands were grossly diseased. It is interesting to compare these figures with those of Halstead, as the results of the more radical operation by his name. In spite of a more extensive operation his results appear no better than those I have quoted. He reported 46 per cent of the patients died within three years. As regards cancer of the rectum, Mr. Harrison Cripps was able to report that 42 per cent of his cases were alive three years after operation, and most of them were perineal excisions. Not many of us can show better results. Unless we can prove our efforts to be more successful, we are living in a fool's paradise."

Commenting further he adds, "Is there anything in our technique or method of attack to account for this apparent lack of progress? I would suggest two questions. First, are we allowing the teaching of pathology to over-ride clinical experience? No one has greater regard for pathological work than myself, but I am inclined to think that some of the conclusions arrived at in recent years have tended to hinder, rather than to further, progress. Pathologists tell us that cancer cells are scattered far and wide beyond the apparent limits of a growth, and consequently they urge the necessity of a wide and extensive excision. The microscopical observations may be accurate but the inferences drawn therefrom are not necessarily infallible. If it be true that cancer cells extend far beyond the site of growth, the conclusion is irresistible that the tissues can and often do destroy the isolated cells which are left behind beyond the line of excision. To this extent I submit pathology has led us astray. Our efforts have been directed towards more extensive operations, whereas earlier diagnosis and earlier operation should be our aim." The second question Mr. Paterson put is this: "May it not be the case that in modern surgery the lymphatic glands are too ruthlessly attacked? Do we fully appreciate the part played by the lymphatic glands in nature's defense against the spread of carcinoma? If, by operation all the neighboring glands are removed, may we not be depriving the patient of his first and main line of defense? There can be no doubt that cancer cells, spreading from the

primary growth, are arrested, at any rate temporarily, in the neighboring glands. Possibly the glands may be able even to destroy a limited number of cells, when the primary growth or focus has been removed. Most of us have met with cases in which operation for malignant growth of the bowel has been necessarily incomplete; in that the glands obviously infiltrated with carcinoma have been left behind, in spite of which the patient has lived ten, twelve, or even more years. It is a fair inference that such patients have remained well, not in spite of, but because of the incomplete removal of the glands. It is difficult to explain such happenings except by the hypothesis that the cancer cells left behind have been destroyed by the healthy tissues in which they were unwelcomed guests." In conclusion Mr. Paterson remarks, "I need hardly add that nothing I have said is meant in the slightest degree to discourage operations for cancer or to underrate their necessity. My plea is for earlier and, therefore, less extensive operations and especially operations in two stages whenever practicable—that is, removal of the growth and of the glands at a later period. Let us not be in a hurry to remove Nature's first line of defense."

X-RAY AND RADIUM

X-ray and radium are useful only as supplementary procedures, and as such I sometimes employ these agents. Radiation has not proven as dependable as cutting in operability, and results, on the whole, are not as good. Cutting has cured cancer and so has X-ray and radium but not consistently. We might continue the use of these facilities had we nothing that promised better results. Come, let us reason together. We are confronted with a surgical procedure that does not involve manipulation of the lesion, that is bloodless, eliminating sponging, tying and opening raw surfaces; a procedure that seals the open vessels, and is in itself lethal to the cancer cell immediate and adjacent. Why not give it the benefit of the doubt?

Heat, and of a comparatively low degree at that, has been proven over and over again to be lethal to cancer cells. Cancer cells are rendered impotent or killed when exposed to a temperature of 113 F. for ten minutes, whereas differentiated tissue cells require 140 degrees for a like time for

their destruction. This fact is appreciated by most surgeons but the difficulty of its application has been the draw-back. Successful technic in the use of heat in cancer surgery is more difficult to acquire than that of the knife and forceps which are comparatively simple and in common use. Heat surgery requires complicated apparatus in charge of a trained assistant before it gets to the surgeon. The surgeon, who applies this agency, must know the effect of different degrees of heat on the tissues involved. He must select the type of instrument necessary to apply the degree of heat demanded in the particular operation or stage of the operation in progress. The dissecting process requires red or white heat, quickly and deftly applied with a knife-like electrode. Hemostatic effects are produced by dark heat which seals by coagulation. Dark heat or cold cautery is demanded where deep heat penetration is desired as the Percy Cautery. Here heat must be maintained in contact for a considerable time in the absence of tissue carbonization. Carbonization or burning prevents heat penetration. White heat burns: dark heat cooks or coagulates. For many years I have been an ardent advocate of the cautery procedure in all of my cancer work and I am firmly convinced that I have secured better results than by any other method. In locations where the cold cautery could not be used I have had recourse to the electric cautery and the cautery knife.

Surgical diathermy has been in use abroad for many years. I spent most of last summer in London and witnessed its use by surgeons of St. Bartholomew's, Guy's and Middlesex hospitals; some of them relied entirely on electro-coagulation in much of their cancer surgery.

The last few years electro-coagulation has received a great deal of attention in this country. It is the finesse in heat application in cancer surgery. It admits of fine adjustment, from mass destruction to the delicate desiccating spray. As a general proposition I do not think it possesses better curative properties than the electro-cautery of Byrne and Percy. For many years I have used the cautery exclusively in all my cancer work. This includes hysterectomies for uterine cancer as well as breast amputations. Without going into details I know my results have been better by comparison with the results of cutting surgery.

Breast amputations are done with the cautery knife, and only for making skin incision do I use cold steel and not always then. If the technic is correct dissections can be made just as rapidly and with as delicate precision with the hot knife as with the cold. The knife should be glowing and with instantaneous touches the tissues are severed and no time is given for the heat to be transmitted where it is not wanted. The removal of glands, for instance those adjacent to delicate structures, can be accomplished with the utmost accuracy and without fear of injury. Those witnessing the hot knife dissection for the first time or unfamiliar with the after sequence of the operation, often remark that there must be a lot of after pain and interfered healing. The opposite is true. There is usually less pain and the healing is just as good, if not better, than when the cold knife is used. There is less pain because the heat obtunds the nerves, and the wound is not as liable to become infected. There is less oozing and serous discharge after the use of the hot knife. These facts are accepted by my associates, assistants, and nurses at the hospital where I have worked for many years. In other regions of the body, from which it is deemed advisable to remove malignant growths, the hot knife procedure is just as practicable.

The last two or three years I have used electro-coagulation extensively, often in conjunction with the cautery knife for quick clean dissection in breast work and vaginal hysterectomy in operable cases. When lymph glands are to be treated I do not dissect or dig them out but thrust in a diathermy needle and coagulate them. I have used the radio knife, which is a surprisingly delicate and effective way of separating tissue, but I can see no advantage in cancer surgery over low frequency cautery knife as I employ it.

The fundamental principles of the application of heat in the treatment of cancer were established in 1889 by Dr. John Byrne of Brooklyn. Dr. Byrne reported 20 per cent of his cases of cancer of the uterus treated by high amputation of the carcinomatous cervix by knife cautery as alive and well five years after. Who does better today especially when we consider the lateness at which he must have received his cases? Having the proper comprehension of cancer and realizing the significance of Byrne's results, Percy proceeded to de-

vide an electric cautery that has furnished good results when properly applied.

My practice is this in cancer of the cervix: If it is still limited to the cervix, a high amputation is made by cautery knife or its destruction is effected by electro-coagulation. If there is uterine fixity, indicating involvement of parauterine tissues, I resort to electro-coagulation or Percy cautery. Outward exuberant cancer growths are destroyed by electro-coagulation; and the basic growth is treated by further electro-coagulation or cold cautery as seems best in that particular case. I have an antipathy for fixed methods.

ADVOCATES HEAT TREATMENT

Give cancer the heat treatment; for after all it is heat that does the business whether actual cautery, electro-cautery as administered by low frequency current, or high frequency electro-coagulation of desiccation. There is no virtue in the electricity per se except the heat it furnishes. However, there is this about the heat produced by the high frequency current: It is generated in the tissues by tissue resistance. A large or indifferent electrode is placed on any convenient body contact. The active electrode is a needle point. The D'Arsonval current is then passed through the body of the patient and is concentrated at the needle point in the growth to be destroyed. The needle itself does not get hot but the surrounding tissues do, so that there is coagulation immediately around the needle. Around the coagulated zone for an indeterminable distance there is a sub-coagulation temperature. In this zone there is a temperature that it is reasonable to suppose is a menace to cancer cells without devitalizing the normal tissues. Herein lies the advantage of surgical diathermy. All other heats are of extraneous origin. I have not here the time to debate the virtues of each, but each possess virtues applicable to different situations and conditions. It is the wise selection that gets the best results. I have seen the application of X-ray and radium by the best operators; studied and tried to follow their results and I am convinced that the heat treatment, properly applied, will do more as a curative or palliative agent with greater precision and certainty.

CONCLUSION

1. Be a cancer propagandist. Know cancer yourself, and teach your patients the importance of early diagnosis and treatment.

2. Don't rely on the textbook diagnosis nor the microscope. As a general proposition more lives will be saved by history and gross appearance. Any lesion occurring in cancer age, cancer locality, preceded by an abnormal condition or irritation, that so closely resembles malignancy as to suggest the microscope, had better receive cancer surgery without delay.

3. Don't talk operation, X-ray, radium, cautery or electro-coagulation but talk cancer.

4. The whole cancer question must be reconsidered. Our mental attitude toward cancer must be changed from pessimism and apathy to optimism and action. Realize that we know enough about cancer right now to prevent or cure it, if we would only intelligently apply what we know. The main curative agent of syphilis was discovered before the spirochete, and this is true of other diseases. We do not know just what electricity is and yet we use, regulate and apply it freely. So let's not alibi ourselves by the thought that the ultimate cause of cancer has not been discovered. It will be of course, but I doubt if it will enable us to treat it better.

5. Cancer should be made reportable to the Board of Health. This is a foundation of principle. The amazing thing is that it has not been. In this way we could get a definite line on its incidence and topography, and especially on its morbidity. The reporting of every case of cancer, age and sex, nationality, community, location where originated, antecedents, environment, physical condition of patient (past and present), anatomical location, when symptoms were first noticed and when competent advice was first sought, would do more, in my opinion, to clarify the cancer problem than all the obfuscated experimentation, transplantation, individual idiosyncratic therapeutic promotion and theorizing extant. We have a professional responsibility to face, the neglect of which, under the circumstances, will not add to our laurels to say the most. Does not the exigencies of the situation demand the utmost vigilance?

How, then, can we better our cancer results? By studying cancer in all its phases. Know cancer. Know your patient and his lesion and apply, as Bloodgood says, "the right treatment first," and I would like to add, "the first treatment right."

See page 194 for discussion.

A More Hopeful View of Cancer with Special Reference to Gastric Cancer*

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The campaign against cancer that is now being waged so extensively all over the world, just like the one against tuberculosis, is beginning to bear fruit. A better knowledge of the nature of cancer, its life cycle, growth, and destructive tendencies has resulted in earlier recognition, and consequently in more successful treatment.

The appreciation of the fact that patients may be the victims of a cancer for a varying period of time, ranging from three or four months to two, three or five years, before succumbing, and that a patient may resist its onslaught indefinitely, and even permanently, should serve to give the public a less desperate view of this affliction, and should give the physician the courage to combat cancer with hope rather than with resignation, as so commonly is the case. We have arrived at a stage where the mere diagnosis of cancer is not any longer equivalent to certain death. We not infrequently meet with cancers of the tongue, of the breast, of the uterus, where with an assurance bordering on certainty we can tell our patient, "This is cancer, but you can be cured."

One must not necessarily have grown old and hoary in the profession in order to be able to look back upon some case of cancer, that contrary to our expectation and judgment, and without aid, has gotten well and has remained so. I feel convinced that there are several of my hearers in this hall, who could recall one or more instances of this nature. It is true that in our mind a doubt may be lurking as to whether such spontaneously cured cases were actual cancers, and not merely infectious swellings. To them I can say that many competent physicians and surgeons have had similar experiences, and have had equal doubts. Of these some have repeatedly been able to verify their clinical opinion by the microscope and have noted the final outcome by subsequent observation extending over years. In his presidential address, delivered before the College of Surgeons in 1920, Dr. Charles Mayo says: "It is probable that there is a measure of immunity against cancer in

all persons, and that this is sufficiently great in some to prevent them from having cancer. I have on several occasions not been able to remove all of a cancerous growth, and to my astonishment the patient has remained well for a term of years."

For those reared in the belief that cancer is an incurable disease, it is hard to cast their doubts aside. That a cancer growth can be extirpated, and that the metastases present at that time can remain dormant for many years before becoming active again of this I have no doubt and shall cite a case in point.

J. E. J., a farmer, 55 years of age, from the northern part of the state, came to me in 1908 with an extensive carcinoma of the left lower lip and face, involving the submaxillary lymphatic glands. The whole was removed in one mass at that time. In 1909 he came back with a glandular swelling posterior to the sterno-mastoid muscle on the same side. These glands were dissected out. Nine months later he came with enlarged carcinomatous glands in the right submaxillary region, which also were removed. For a time I saw him about once a year, for purposes of re-examination. In 1914 he became infected with trichinosis from which he recovered. Then I did not see him again until 1921, that is thirteen years after his first operation. He then had a distended nodular feeling abdomen, was deeply jaundiced and was evidently dying from carcinomatous metastases of the liver and abdomen. Autopsy confirmed the diagnosis of carcinoma of the liver.

Here was a man with an advanced cancer of the lip and face, who, when he first presented himself for treatment had extensive lymphatic involvement of the neck. That he at that time also had metastases of the liver may safely be assumed from the subsequent history. For nearly thirteen years these metastases lay dormant in the liver and were prevented from growing by the natural tissue resistance or by an immunity resulting from the protecting forces of the body.

While this inherent body resistance was not sufficiently strong to prevent the growth of the primary cancer, it is quite conceivable and compatible with our ideas of the development of in-

*Presented at the 78th Annual Meeting, State Medical Society of Wisconsin, Green Bay, August, 1924.

creased body resistance or immunity that these forces were or became strong enough to render inactive many of the general metastases already present.

SOME PRACTICAL CONSIDERATIONS

It may be a question whether it is wise or correct to think of these protecting forces as of a state of immunity. Perhaps it is best here to indulge in a few practical and theoretical considerations in order to understand better what is to follow. Probably the vast majority of bacteria that enter our body are rendered innocuous in short order. Some cause local disturbances, as pain, redness, swelling, and possibly pus formation, while others may become generalized and result in septicæmia and death. It may be a question whether the latter are primarily more malignant germs, or whether they merely become more robust or malignant because they happened to infect an organism especially adapted to their vigorous growth. Thus it may be with cancer. Some, like the epithelioma of the skin remain indolent, slow growing for almost a life time, others, like the scirrhus cancer are faster in growth, though still comparatively slow for several years, while still others, like the juicy adenomatous type may prove fatal within a few months. We are taught to recognize various kinds of cancers, classifying them according to their cellular structure and degree of malignancy. Yet may it not be that both, structure and malignancy are not inherent primarily in the special cancer cell, but are characteristics evolved from the type of cells affected and from the readiness with which they thrive in the tissues of the patient; that the degree of malignancy is not a cell peculiarity, but is an acquired characteristic dependent upon the chemiobiologic condition of the tissues in which the cells grow? The less restraint there is shown the proliferating cancer cell, the less defense on part of the body, the more rapid the growth, and the greater the malignancy, the more restraint and defense, the more benign is the tumor and the slower the growth. The type of the predominant cell and the amount of fibrous tissue in the growth fairly accurately determine the degree of malignancy as has been shown by McCarthy. The anatomical structure of the resulting tumor depends largely upon the resistance of the tissues against the invasion as manifested by increased fibrous tissue formation. Generally

speaking, the more fibrous a tumor the less malignant, the less fibrous the more malignant.

Another practical consideration: A bacterial infection can spread and can be transplanted from one human being to others. Not so with cancer. The attempt to transplant a cancer from man to man has never been successful, nor have operating surgeons and pathologists ever acquired the disease by handling the tissues, while bacterial infections quite frequently are acquired that way. Whether accidentally or experimentally transplanted, something in the other tissues stops the growth. If, however, transplantation of cancer is attempted from one part of the body to another in an individual already suffering from cancer the results are decidedly different. Successful auto-implantation is common. For example: But a few months ago we had a carcinoma of the cervix in a young woman. It seemed inoperable. An attempt was made to make it operable by the use of radium. The vagina was thoroughly cleaned and radium inserted into the cervix with the result that considerable shrinkage took place and that an operation was deemed practicable two months later. When examining the patient at that time I noticed three small nodules at the margin of the introitus, varying in size from a hemp seed to that of a small pea. These had not been observed previously. They proved to be carcinomatous nodules and were considered by me as implantation metastases being probably implanted by the secretions from the breaking down cervix into small fissures produced at the time when the vagina was cleaned to insert the radium. Similar implantation metastases have been observed and recorded by others. Dr. Charles Mayo mentions them. He speaks of implantation carcinomata as occurring in the colostomy wound in a case of cancer of the rectum and sigmoid where he assumes that by retroperistalsis cancer cells were carried upwards and became implanted in the wound. The Schnitzler metastases in the pelvic pouch, the Kruckenberg tumor so frequently seen in cancer of the stomach are recognized to be implantation metastases from cancer cells liberated from the stomach and dropping into the deep peritoneal recesses.

But a few months ago I operated a case of carcinomatous ulcer of the lower curvature of the stomach in a man thirty-two years of age. It had

involved the glands in the gastrocolic omentum, the transverse colon, and the under surface of its mesentery. I removed half of the stomach with three inches of the transverse colon, and the corresponding portion of the mesentery in one block. About two months later the patient returned with vomiting and symptoms of obstruction. On opening the abdomen almost the entire small and large intestines were covered with fine sand-like dots, which proved to be carcinomatous. Undoubtedly during the operation lymphatics had been opened and a sowing of the cancer cells into the abdominal cavity had resulted, producing an acute peritoneal metastatic carcinosis by auto implantation.

How shall we correlate the facts just mentioned? What conclusions can we draw when we consider that primary cancerous growths may disappear spontaneously and that malignant metastases can remain inactive in the liver for thirteen years, that hetero implantation of cancer in the human is impossible, but that autotransplantation is not an uncommon occurrence?

Since autotransplantation of skin is always successful, but hetero transplantation never so, since the red blood corpuscles in blood transfusions in patients of a corresponding group will live, while those of different groups will be promptly destroyed by haemolysis, it is probable that there are chemical reactions, or biologic differences in two individuals sufficient to prevent life and growth of the transplanted skin, of the transferred blood corpuscle or of the implanted cancer cell. It is also likely, that very fine variations of a chemical or of biochemical nature exist in the different body regions of the same individual even, or that such differences may develop in course of time and with age. For certain organs like the small intestines are almost free from malignant catastrophies, while others are decidedly prone to them. The liver metastases in the afore mentioned case, although auto implantations, almost behaved like hetero implantations, that is, they were temporarily unsuccessful. The local bio-chemical or biologic conditions in the liver were not as yet similar to those conditions in the lip and face where the cancer originally grew, and the auto transplantation was not successful until after thirteen years.

From our own personal observation, and from those of many of our most experienced American surgeons, there seems to be no doubt that carci-

noma may occasionally disappear spontaneously, and that its growth, as well as that of the metastases can be held in check for years, meanwhile permitting the patient to lead a useful and enjoyable life. In such instances it has usually been found that a fibrous wall or capsule has gradually enveloped and permeated the growth, this practically isolating it from the adjoining tissues. The important question to us as physicians is, of course, can we imitate nature's efforts of inhibition of growth or of cure? To do this intelligently, and not entirely empirically we must have a conception, a theory as to what is taking place.

A THEORY ESSENTIAL

The Cohnheim theory of displaced embryonal cells suddenly assuming growth is not accepted by most pathologists in its entirety, and Ribbert does not think that the embryonal nature of the displaced cell is essential to cancer formation, but believes that any postfoetal cell can assume a proliferation growth provided that it has become separated from its union with the sister cells, to which it was bound anatomically, functionally, and biologically. A community of cells like that of an organ, controls the growth and activity of the individual cells just as the individual man is controlled and regulated in his function and behavior by the community in which he lives. If by trauma or inflammation or other disturbance this post-foetal cell is separated from the community influence, its former well directed and purposeful function becomes lost, harmful, and to no purpose, and then its primal function alone, that of reproduction, remains and becomes paramount. The essential part of Cohnheim's theory is the embryonal nature of the proliferating cells, that of Ribbert rests in the assumption that any cell, embryonal or postfoetal can grow wild, given only the separation of the cell from the orderly cell union or system of which it formed a part. There is a consequent loss of the restraining and directing influence of the cell community to which it originally belonged.

While this may explain proliferation and tumor formation it really does not account for the element of clinical malignancy. Here another consideration must enter. The cancer cell is not a normal cell. It differs from the latter in nuclear changes and changes of its protoplasm. Biologically the normal cell is autolytic, it is subject to

life or death, that is it destroys itself. The cancer cells are both autolytic and heterolytic, that is, they also destroy other cells. That which changes the embryonal (Cohnheim), or the postfoetal (Ribbert) cell into a malignant one, from an autolytic into a heterolytic type is a subsequent factor, one long recognized by Rudolph Virchow, as that of chronic irritation. That a normal cell can be changed into a malignant one by chronic irritation has definitely been proven by Yamagiwa and Ichikawa, two Japanese investigators, who experimentally produced the so-called tar cancer in rabbits. Chronic irritation may safely be assumed as existing in the roentgen ray carcinoma. Other examples are: The lip cancer of smokers, the cancer of the tongue in the presence of irritating teeth, the serotal cancer of chimney sweeps, and the frequent cancers in scars. Chronic irritation, then, is the additional factor necessary to produce malignancy. The element of malignancy manifests itself locally by destructive heterolytic growth into neighboring organs, and systematically, first by the development of metastases in distant organs, and second by a reduction of body function, probably through toxins and ferments, resulting in what is generally known as cachexia. How long a malignant growth remains local is not easily ascertained. I believe, that at an early period, long before the tumor is recognized clinically, and while still microscopic, cancer cells and toxins are distributed throughout the body by the lymph stream as a rule and by the blood stream occasionally. No doubt most of these cells are destroyed by the natural defense agents of the body or if not destroyed are held in abeyance for many years, as was seen in one of the cases cited.

Let us then hopefully bear in mind that metastases do not always grow, and let us not lapse into a pernicious inactivity and resignation just because they are present. Dissemination through the lymph stream is a comparatively slow process, as the cell must pass through lymphatics, must often break through successive chains of lymph glands before they enter the general circulation. Recognizing the fact that the cancer cells preferably attack the bloodvessels, and break into them, it is surprising that blood dissemination in carcinoma is not the rule. Again blood dissemination may occur oftener than we realize. Thus a cancer is strictly local probably but a very short time.

It becomes regional quite early through the lymph glands, and may be general before it is regional if dissemination happens to take place by the blood stream. The latter explains those cases where pulmonary or spinal metastases are clinically manifest while the small parent tumor in the breast or prostate is not larger than a pea and still unrecognized.

Thus as far as our actual knowledge goes, cancer spreads locally by heterolytic infiltration, regionally and systemically by way of the lymphatics and blood stream. That nature makes a tremendous effort to hinder its progress we may be sure of. The fibroplastic activity that occasionally can be seen around a cancer nodule, the fibrous tissue formation in the tumor itself, as seen especially in the scirrhus type of cancer, and even in patches of the quickly growing adeno carcinoma, may safely be interpreted as more or less successful efforts of nature to stop the local invasion. The checking of systemic invasion by lymphatic enlargement, the prevention and hindrance of growth of the metastatic cells by the blood, the increased leucocyte count, and the occasional rise in temperature point to nature's special methods of defense when general dissemination takes place, and the circumscription and invasion of the primary or metastatic tumors by fibrous tissue marks the local efforts to circumscribe and isolate the growth, thus excluding, yes, practically extirpating it. With this in mind our treatment of cancer is directed along lines fairly well indicated by nature.

LOCAL REMOVAL FIRST

Our methods aim, first at the local removal of the primary growth so as to prevent further dissemination of cancer cells, and also to stop the formation of the ferments and toxins by the tumor, and second they include a general line of treatment calculated to aid and enhance increased protoplasmic activity of all the healthy cells, which activity we have found to be so important in raising the general body resistance and defense. While local extirpation of the primary growth by the knife, cautery, or radiation is of the greatest importance, we should fall far short of our duty were we to rest here, as so often is the case, and contentedly wait to see if recurrence takes place or metastases arise. The latter we need not wait for, they are there, even if but microscopically, and it behooves us to whip up the tissues to their highest

protoplasmic activity in order to overcome and destroy them. It is the great need of a general post-operative treatment of cancer that constitutes one of the points that I wish to stress today.

Remembering that cancer is a local disease but for the briefest of time, and becomes a general affection extremely early, we must realize when the operation is successfully completed that only a part of our work has been done, that but the initial step in the fight against the cancer has been taken. Such remaining cells as have escaped the knife or cautery we aim subsequently to destroy by energetic roentgen or radium therapy. Such has been the treatment for some time past. The measures, however, that I wish attention especially drawn to, and that so frequently are neglected and ignored, are those that whip up the protoplasmic activity of the healthy cells of the body generally. At once the attempt to increase body resistance and defense should be begun. Here we enter indeed upon a very large field of therapy, which it would be profitable to discuss, but time demands that we allude to these measures but very briefly. Immuno-therapy, both active and passive, and chemico-therapy are the methods employed. In attempting to develop cancer immunity animal experimentation has shown the value of various sera and toxins, of which in man, the Coley prodigious and erysipelas toxins have for years shown a surprising degree of effectiveness, especially in sarcoma. Of the chemical remedies arsenic and iodine preparations have enjoyed of old a certain and often undeniable renown. Of late the administration of heavy metals, as gold, platinum, silver, zinc, and lead, in colloidal form have been administered with varying effect. By inducing an increased functional cell activity, a plus of metabolic, opsonic, genetic regenerative cell function, such as would approach that of youth, a hyperergasia, the defense mechanism would be at its height. In studying the action of these remedies it seems likely that both immuno- and chemico-therapy depend for their effectiveness, not upon any specific action on the cancer cell itself, but upon the effect they produce upon the blood forming organs, bone, spleen, and lymphatic system, by increasing the number of leucocytes and enhancing the cytolytic action of the blood, and upon the stimulating effect on the protoplasm of the healthy cells. It is well known that a

vigorous leucocytosis, especially of the lymphocytes as recognized and controlled by the blood count, is a favorable omen for the success of our treatment, and any measure able to produce this should be employed. Thus the aim should be to keep up as high a degree of body vigor as possible.

Experimentally it has further been proven that in the test tube at least the serum of a normal individual readily destroys and breaks up cancer cells, while the blood of a person already affected with cancer has lost this ability. This fact is pregnant with suggestiveness. It would seem that repeated post-operative transfusions of healthy blood are indicated as they might aid us signally in this war against metastases.

NEARING A SOLUTION

It cannot be denied that all over the world the feeling exists that we are nearing a solution of the cancer problem, or at least are making a long stride forward in its cure. My own hopefulness has been braced and boyed up by the results we have repeatedly obtained, especially in the treatment of advanced cases of cancer of the stomach. The skepticism regarding the curability of gastric cancer is well nigh universal and yet for many years I have felt that it was not justified to that extent, and I have lost no occasion to express my conviction and to act accordingly when a case presented itself. I wish again to do so now.

The cry that cancer cannot be cured has been used much to the disadvantage of patients, and certainly has been a chain around the neck of the physician and an obstacle in his effort to help. The exacting requirements of total eradication and of a complete and lasting cure in carcinoma are absurd and unfair. Is a patient ever completely cured of typhoid fever, tuberculosis, nephritis, tonsillitis, or even an infected tooth? Are not the focal infections following these conditions often a permanent menace to the individual? Still we treat them vigorously and often not with more success than we treat cancer. Untreated gastric cancer inevitably leads to death, and the concluding months are pitiable indeed. We should, therefore, treat it promptly and radically. Like anywhere else the earlier the diagnosis and the prompter the surgical interference the better the prognosis.

In relation to early diagnosis it must be regretfully said that this but rarely occurs. My own

experience coincides fully with that of Dr. Christian, of Boston, who finds that in spite of constant watchfulness in the clinic, and during abdominal operations for other affections, to find a really early gastric cancer is extremely rare. For many years I have urged, and when permitted to do so, have practiced the exploratory incision in all cases of obscure stomach disturbances in people of the cancer age, feeling that the finding of an early gastric cancer would justify and be worth the effort, but so far I have not been successful. The roentgen examination is able to reveal gastric cancer in over 95 per cent of the cases, yet in practice an early case is but seldom found by this means, as the absolute painlessness of the beginning of gastric cancer gives the patient no warning and he does not apply for aid until late. When we are asked to examine a gastric case, and when we diagnose cancer it is generally large enough to be palpable and is fairly well advanced. Desirable as it may be to operate early we must take the cases as they come. The roentgen ray will not always be able to tell you whether a case is operable or not. It may give you an idea to what extent the stomach is involved, but it will not tell you concerning metastases or invasion of other organs. Ocular inspection alone can solve the problem of operability. Then, the abdomen once opened and having full confidence in your surgical ability, your purpose must be nothing short of radical excision. The operative technique ought to follow the principles laid down for the radical operation of the breast, and that of the uterus, that is the wide excision of the tumor and removal of enlarged lymphatics en bloc. To quote Schoenbauer and Orator from a paper read before the Vienna Medical Society, "It must be made possible also to develop an operative technique for gastric cancer that stops only at such vital centres as the hilus of the liver and the head of the pancreas,* just as the Wertheim Operation in cancer of the uterus finds its limitation in the ureters. A Wertheim for the stomach must be found."

For my own conduct I have laid down the rule to remove every cancer of the stomach if it comes within my technical ability to do so, barring only such cases where the presence of ascites speaks for extensive peritoneal metastases, and where the liver is greatly involved. Enlargement of the lymphatic glands is no contra-indication, nor is

the involvement of the liver by contiguity, or of the colon, such. I would also be extremely wary about calling a case too far gone or too weak for operation. Glucose by hypodermoclysis, blood, transfusion, and operation under local or partially local anesthesia will often surprise you and will occasionally gain a victory for the bold, but competent surgeon when little expected. But what of the inevitable operative deaths? If the patient and his friends are properly informed of the risk and of what is at stake, you need not fear them. At any rate I have no patience with or respect for a surgeon who selects his cases with a view of not spoiling his low mortality record. He is not a real surgeon. His low mortality statistics are of value to him alone. They may tickle his vanity, scientifically they are of no import. I therefore am never especially impressed with the analysis of statistics, running in the hundreds or thousands, proving or manipulated to prove one thing or other, nor will I offer you any of your own. Experience with cases, such as I will briefly relate in a printed addendum, convince me just as completely of the correctness and humaneness of my attitude as an accumulation of cases running into the hundreds. All I wish to urge upon you now is to be ever on the lookout for gastric cancer, to diagnose it promptly, and then to give the patient, not merely a show, but the full measure of your surgical ability, to be followed by proper Roentgenotherapy, repeated blood transfusions and by a skillful therapeutics to bring out the defensive forces of the body to their fullest extent.

*Even the head of the pancreas is no longer an obstacle to radical gastric surgery. But six months ago I operated, with complete success, upon a case of cancer of the duodenum involving the head of the pancreas; first doing a cholecystocolostomy, then a gastroenterostomy, and then removing in one mass the pylorus, five inches of the duodenum including the common duct and the entire head of the pancreas. The patient so far is well.

See page 194 for discussion.

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Precancerous Lesions and Early Carcinomata; Fulguration Treatment*

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• Janesville.

It is generally conceded that cancer originates at some point of long continued irritation. Always a local disease in the beginning, after a time, which may be short or counted by years, metastases regularly occur through the lymphatic system and the blood vessels to distant parts of the body.

An initial pathologic tissue change is quite essential for the origin of carcinoma. The mode of onset and distribution, except as to time and symptoms, have many things in common with lues, tuberculosis and leukoplakia.

That a lesion may remain a leukoplakia or a scaling spot for years, and suddenly become active and extremely malignant is not an uncommon observation.

I recall the case of a patient who presented a scaling lesion on the side of her nose. This was treated by a nose specialist for twelve years. It finally began to infiltrate the tissues and she lost her nose and both eyes. She bled to death from erosion of an artery at the base of the brain.

Another, a young man had a superficial ulcer no larger than a small finger nail in front of his ear. His wife would not agree to any treatment except X-ray. It healed kindly after a few treatments, but within a few months recurred promptly, and was again treated with temporary success, but persisted in recurring several times until the X-ray seemed to stimulate the growth. He then consulted the late lamented Dr. J. B. Murphy, who pronounced the case hopeless. The patient returned home and promptly hanged himself. All of the medical profession are familiar with many such unfortunate patients.

I mention these cases which have come under my observation to impress upon the younger members of the profession not to think lightly of these seemingly insignificant lesions, which refuse to heal and remain well.

Another case well illustrates the danger of letting small sores remain unhealed. A man 45

years old, had a small superficial ulcer on the back of his hand, the result of a burn, which he received when a child. I suggested it should be treated. He replied that it had been there nearly forty years and had done him no harm. A few years later upon my return from Vienna he called to see me with an inoperable sarcoma, which originated in said sore, involving the hand, arm and side and proving fatal within a few weeks.

I could cite many more cases in which the lesion seemed so trivial and insignificant that the patient refused to have anything done. At a later date these same patients regularly submitted to treatment by cancer doctors, plaster doctors and even the famous John Till, all to no avail. Through procrastination they lost their chance for a cure.

Knowing these things, for we all meet with similar instances, it becomes our duty to teach the laity both publicly and privately the proper thing to do to forestall calamity. We must adopt that mode of treatment which will cause the least inconvenience, pain and loss of time as well as curtail expense, especially to those whose means are small.

A few years ago, Dr. Clark, of Philadelphia, read a paper at the Atlantic City session of the American Medical Association, in which he stressed the use of the high frequency fulguration. Being interested in such treatment I followed his work and his results were quite uniformly good.

Upon my return I immediately installed a high frequency apparatus and have used this method of treatment, together with the electric cautery, in all epitheliomata without glandular involvement. In more than 100 such cases, the results, both to myself and the patients, have been most gratifying. The precancerous lesions such as superficial ulcer, leukoplakia, scaling lesions, hairy moles and warts are promptly and permanently cured.

In papillomata of the bladder the results far surpass those secured by cystotomy and removal by excision or cautery. Indeed it is astounding what a large lesion can be thus eradicated on the lip, for example, healing with the least possible

*Presented at the 78th Annual Meeting of the State Medical Society of Wisconsin, Green Bay, August, 1924.

deformity or scar and remaining permanently well.

Moles, warts, naevi, keratoses, cutaneous horns and local carcinomata can be removed under local anaesthesia without pain or discomfort or loss of time or inconvenience. Accordingly the patient who is averse to an operation at the hospital, and who would put it off if such were suggested, probably until an extensive operation would be necessary, will readily submit to the operation in the office at an early period when he is easily and permanently cured.

ADVANTAGES IN FULGURATION

In comparing our results, using the fulguration method combined with the actual cautery, I have observed the following advantages:

1. There is much less scarring and deformity.
2. The patient receives treatment in the early stages of the disease, hence the percentage of permanent cures is large.
3. This method can be safely done in the office with no loss of time or hospital expense.
4. The treatment is entirely painless under local anaesthesia.
5. Nausea and vomiting are eliminated.
6. There is much less danger of spreading the disease because the lymphatics and blood vessels are all sealed by the coagulation of the tissues.
7. The great fear which some people have for the hospital may be eliminated.
8. There is no loss of time or disability.

I must emphasize the latter point which counts for so much to the busy person who is likely to put it off until what would be a very insignificant procedure has become a formidable operation with not too good a chance for a permanent cure.

X-RAY AND RADIUM

As regards the value of the X-ray as a cure for cancer, I have used one for some 30 years and have observed its use by many others of greater skill and wider experience. Excluding the superficial epidermoid carcinomas and the early cervical cancers, I must confess I have little faith in it as a cure.

Our experience with radium and observation of its use by others has not led us to believe it more efficient than the X-ray, except that it can be used in cavities where the use of the X-ray is not available.

Both have their place in the treatment of certain

malignant lesions. In cases of inoperable cancer each may control hemorrhage, lessen pain, slow up the progress of the local lesion and thus promote the comfort and prolong the life of the patient. Hence I employ and advise the use of each, but I never promise a cure from either.

I do not advise the high frequency current as the proper treatment in neglected cases where there is glandular involvement. We have used it in carcinoma of the tongue where any other treatment seemed useless and obtained a cure which has now lasted for four years in one patient. Such a result in this type of extreme malignancy is surely encouraging.

Accordingly I would recommend it in properly selected cases, for the following reasons:

1. Ease of application.
2. Patients readily submit to its use.
3. Local anaesthesia is entirely satisfactory.
4. Minimal danger from hemorrhage.
5. Can be used in cavities where other forms of treatment are less available, as the bladder, mouth, tongue and tonsils.
6. There is less danger of disseminating the disease.
7. The results in a large series of cases have been very satisfactory in our clinic.

Geraghty of Baltimore, speaking of bladder tumors, reports as follows:

"In only tumors which were papillomata has fulguration succeeded. When, however, the papillomata are malignant the response to fulguration may be extremely slow and lead almost to discouragement. It can be positively stated that fulguration should be the treatment selected for all papillomata, benign or malignant, in which infiltration of the bladder wall has not occurred, and that it yields results incomparably superior to the most radical operative procedures."

Dr. B. A. Thomas of Philadelphia writes as follows:

"It is quite possible in small vesicle tumors, even in the stage of carcinomatous degeneration to effect a cure by a specialized high-frequency current."

By virtue of the simplicity of the technique, capable of being employed by anyone familiar with cystoscopy, and a belief in the superiority of the result over that of common operative cystoscopy, we are strongly of the conviction that in high-

frequency desiccations, erroneously styled fulguration, the surgeon has at his command a new measure that will challenge, rival and surpass in effectiveness the long established methods of treatment of intravesical neoplasms. Indeed, it is a serious question in the mind of the writer, whether or not a patient with vesicle papillomata should ever in the future be subjected to a radical operation, when treatment by this method is available.

To Beer of New York, is due priority in making practical the destruction of tumors with high frequency current.

LOUDIN CURRENT

The Oudin current has been used for the past fifteen years for the removal of cutaneous or surface growths. He concludes: 1. "High-frequency desiccation promises to be the method of the future for the treatment of papillomata of the bladder."

2. The Oudin current has no selective action for pathological tissue as has been claimed, and will destroy normal tissue with equal readiness.

3. Recurrences and metastases promise to be less frequent than by either suprapubic or intravesical incision and even should they occur they are far more amenable to repetition of similar treatment."

Quoting Dr. J. Thompson of Montclair, New Jersey:

"I believe that every case of localized malignancy of the skin will recover if treated thoroughly and skilfully with radium, X-ray and electro-thermic coagulation. Also many cases that are just beginning to show metastasis into the immediate neighborhood can be cured by similar treatment. Melanoma should be treated before they become sarcomatous as owing to their extreme malignancy with their rapid growth and early systemic metastases, treatment is seldom followed by more than slight palliation.

For smaller lesions the Oudin current is used, while the larger and more extensive require the de Arsonval current.

The coagulation should begin in the healthy tissue well beyond the edge of the actually diseased area. This produces obliteration of the blood and lymph channels which tends to prevent metastases. After the coagulation wall has surrounded the lesion completely the diseased tissue itself is de-

stroyed, and can then be removed by curette or scissors, the operator being most careful that he does not get into parts beyond the coagulated tissue.

Melanomata are destroyed thoroughly at one sitting by means of coagulation which is followed by radiation."

1. If treated early and correctly radiation therapy plus electro-thermic coagulation can be expected to cure approximately 100 per cent of skin malignancies with the exception of melanotic sarcoma.

2. The benign fore-runner of melanotic sarcomata, the melanoma, when treated correctly with the above physical agents should produce equally satisfactory results.

3. The results in the treatment of melanotic sarcomata are uniformly bad.

Kretchmer of Chicago, who has had an extensive experience in this field of work writes:

"If we add to the probabilities of recurrences, the probabilities of malignant degeneration of both the original tumor and its recurrences, the dangers of anaesthesia and post operative complications, and if we consider the poor surgical risks in those who have had profuse hemorrhages, extending over long periods of time before being operated on, the outlook for the ultimate cure of papillomata of the bladder is indeed bad.

Any method of treatment, therefore, which is sure in its results, and which can promise a smaller percentage of recurrences after operation, and which in addition requires no anaesthetic is a mode of treatment which bids fair to displace the present ways of dealing with these tumors."

CONCLUSIONS

From my own personal experiences and from the results and conclusions of other surgeons of larger experience in this field of work, I would reiterate the great value of the fulguration method of treatment for precancerous lesions and early carcinomata. That it is most effective I am thoroughly convinced. Perhaps its greatest value lies in the fact that the patients are cured when they first present themselves at the office for examination. Thus the vital period of procrastination is eliminated. What could possibly be of greater importance to the cancer patient? At this time many different types of treatment often effect a cure!

Until the day dawns, which I believe to be not far distant, when the actual cause of cancer shall be established, we must do all within our power to cure the patient of his precancerous lesions at the earliest time possible. Nor should the medical profession relent in its task of spreading the doctrine of the curability of cancer in its early and incipient stages. An ounce of prevention must always be worth a pound of cure!

DISCUSSION.

DR. H. R. FOERSTER (Milwaukee): Mr. President and Members of the Society: We all are very much indebted to the speakers of this morning for their instructive presentations. Each one has discussed the cancer problem from a different point of view and each one has given us some food for thought.

Dr. Nuzum presented the subject of electro-coagulation of cutaneous lesions in very good fashion. The method of treatment outlined by him is a distinct advance in the therapy of many cutaneous malignant and pre-malignant conditions. I do not, however, share his pessimism regarding X-rays and radium. I feel that the X-rays and radium have a very distinct field in cutaneous malignancy and pre-malignant conditions and that they will never be replaced by any other form of therapy.

The electro-coagulation treatment is not a specific treatment. It is destructive just as any cautery or surgical procedure is destructive. The only treatment that has any specificity in cancer is radiotherapy, that is radium and X-rays, but that specificity applies only in certain types of lesions of which the basal celled epithelioma is the most notable example. The electro-cautery is, however, the method of choice over radium or X-rays for those cancer cases that are on the borderline of surgery and those cases and types of lesions that are not responsive to radiotherapy. As Dr. Nuzum has pointed out, the treatment he outlined is one that can be offered to the patient who objects to a cutting operation. However, it should not be carried out in a case that is distinctly surgical.

Dr. McMahon is to be complimented on the excellence of his presentation and on his conservatism in regard to statements of prognosis. There is no question in my mind from observation of cases so treated and of reports on that type of work, which has been done for a long time by men like Clark, Pfahler and Wyeth, that the prognosis is more hopeful in advanced cases treated by surgical diathermy than in similar cases treated by any previous method; but that treatment alone does not suffice. If a lesion is thoroughly treated by surgical diathermy and if then it is further treated with either X-rays or radium, according to approved methods, it is only logical to assume that the percentage of cures will be greater than in cases that are treated by surgical diathermy alone. The failures that Dr. McMahon anticipates in his series of cases are not to be attributed to individual errors of technique nor to surgical diathermy but rather to the advanced stages of the disease in those cases. In cancer the outstanding need is still the need of early recognition and early adequate treatment, though diathermy or endothermy will succeed in many cases too advanced for the knife, radium or the X-rays.

With reference to carcinoma of the lip, I feel that radium is still the method of choice in the early lesions but it is up to the man who wishes to use that type of treatment to be careful not to over-step the limits of his field and not to attempt radium therapy in a cancer of the lip that is distinctly a surgical affair. We all know that no matter what therapy is carried out in a case of cancer and no matter how successful it is locally, the patient will not recover if there is extensive metastatic involvement of the regional glands. To prevent such metastases, or to minimize their activity, the X-rays are a valuable

adjunct to surgical diathermy, straight surgery or radium therapy. I thank you. (Applause.)

PRESIDENT SLEYSER: Dr. Kristjanson of Milwaukee.

DR. H. T. KRISTJANSON (Milwaukee): I wish to emphasize further, what the essayists have said in their clear presentation of this subject concerning the early diagnosis of these cutaneous carcinomatous lesions, particularly of the scalp and face. The rodent ulcer or basal celled carcinoma is a chronic type of growth and metastasis develops late, if at all. However, they may break down early and recur locally after apparent healing, but even then they seldom metastasize, hence the importance of an early diagnosis followed by a radical removal of the tumor. If we wait for a microscopic diagnosis, it may be too late. I believe, therefore, that the early clinical diagnosis of these epithelial lesions is of the greatest importance. These cutaneous tumors of the scalp and face are rather benign in their clinical manifestations. The prickle celled carcinoma, however, is much more likely to metastasize early, Epithelioma of the lip is more of a borderline condition, whereas carcinoma of the buccal cavity is a very serious lesion due to its rapid growth and early metastasis to the surrounding tissue and the superficial and deep cervical lymph nodes.

In regard to the treatment of these epithelial neoplasms, it appears that some form of heat application is the most beneficial. The electro-coagulation when used with X-ray and radium holds out the greatest promise for cure, when these lesions have reached a stage where excision is insufficient to eradicate the growth. Dr. McMahon has shown us this morning what can be accomplished with electro-coagulation applied to these local lesions. He should be commended on the very good results obtained in the treatment of these cases. It seems that the application of the electro-coagulation to these superficial tumors is a distinct step in advance, particularly if used in conjunction with radium or X-ray therapy where indicated.

I am in accord with Dr. Ground's idea of the defense mechanism played by the lymphoid tissue in the body, but if they are involved or invaded by malignant tissue they must be removed if we expect to obtain the best results in the treatment of these conditions.

DR. G. J. KAUMHEIMER (Milwaukee): Mr. President and Gentlemen: I don't do any surgery. It has struck me that the main thing that is needed in cancer prevention, or early recognition, is an intensive and extensive campaign, such as has been carried out in this state against tuberculosis in the last ten years. I have despaired when a woman came to me with a lump in her breast or with irregular bleeding and I have told her she needed an operation. That is usually the last I saw of her. Very few, not more than twenty per cent of the women who come to me and to whom I advise operation for cancer, will go to the hospital unless I am the fifth, sixth, or, perhaps, tenth doctor they have been to. If I am the first or second doctor, they say goodbye and say it permanently.

Another thing, patients are getting wiser and suspicious. I had a case lately of a woman who had had irregular bleeding for a year. I saw her early in June and she refused an examination. The beginning of August she had another hemorrhage and under moral force she allowed an examination and I found a most extensive crater extending down the anterior wall of the vagina to the neck of the bladder. Dr. Frank McMahon saw the case with me last week. We are going to use radium on her as a palliative. When I spoke of radium, she said, "I have cancer?" Patients are beginning to associate the use of the X-ray or radium with the idea that they have got cancer.

We have very much less trouble now (we still have some, of course), in getting patients to go to a tuberculosis sanatorium. They don't get as mad as they used to twenty years ago when you told them they had lung trouble. It needs an extensive and intensive campaign to convince these people that cancer seen early is amenable to treatment just the same as the laity now understand tuberculosis when seen early is amenable to treatment. (Applause.)

DR. A. A. HOYER (Randolph): Mr. President and Gentlemen: We are treating cancer as a symptom rather than a disease. I want to call your attention to a member of the Chicago Medical Society who believes she has found the cause of cancer. She probably is not very far from it.

In my own practice I use Emetin. I give this treatment merely as a suggestion to you. We do not use Emetin when the patient has expended his natural immunity against cancer. I believe you will find you can get some results in the early inoperable stages of cancer with Emetin. I wish to make the statement that we had better treat cancer as a disease rather than a local symptom complex.

PRESIDENT SLEYSER: Any further discussion? Colonel Gilchrist, would you like to say something on cancer to us?

COLONEL GILCHRIST: No, sir.

PRESIDENT SLEYSER: May we hear from our friend from Michigan, Dr. Hornbogen?

DR. HORNBOGEN: I have nothing to say on the subject. I have been thoroughly impressed with the papers this morning and I shall try to carry some of the suggestions into effect in the two hospitals where I do my work. I want to thank each and every one of the members who furnished this symposium on cancer because it was very, very instructive. (Applause.)

PRESIDENT SLEYSER: If there is no more discussion, I will call on the essayists to close the discussion. Dr. Nuzum, have you anything further to say?

DR. NUZUM: I just want to report a case from which I removed quite an extensive cancer of the breast. She came and took X-ray treatment regularly for a year. Fifteen years afterwards I examined her and she was in perfect health, absolutely nothing to indicate she ever had any malignancy. Five years later, which made twenty years, she died of an internal cancer. Of course, the question is, was that a recurrence or was that a new cancer? We know that tuberculosis will become encapsulated. I had a patient that remained well thirty years and then began to spit up chalky material and very soon died of a general tuberculosis, an acute tuberculosis.

Is cancer transplantable? In animals I say absolutely yes, because we know you can transplant cancer in mice at your will practically. Not all of them will take it equally well. Probably that is due to the fact that their blood differs, and we ought to compare their blood as we would for a blood transfusion. We do know that mice where they have been inoculated and had it several generations take it very easily, while other strains of mice that have never been treated or inoculated take it very difficultly, showing they do lose their immunity after a time, and you may call that, if you please, heredity.

What is the cause of cancer? I believe that the time is coming very soon when we will know the cause of cancer and I believe, just as every other disease we know of now, practically every one, it is caused by some form of bacteria. I think that the bacteria produce irritation which causes the unnatural growth of cells which we call cancer just as determined in syphilis and many other cases. I don't believe that those cells have been cancer from the beginning. We do know that a local irritation predisposes to cancer. Why? Because it lessens the resistance of the cells where the cancer germ gains admission and the bacteria get there just as they get there in any other form of disease.

X-ray and radium are wonderful things in their place and have their specific use, but I would hate to trust either of them in case of cancer. In case of cancer of the breast my experience has been quite different from the doctors who discussed this a moment ago. I say to patients where I find a lump in the breast that that ought to be removed and it ought to be removed right away because ninety-five per cent of those cases that remain become cancer and you can't afford to take the chance, and if you remove it now while it is a simple little nodule which probably is not cancerous, you are free from worry and care and from danger of future cancer. They nearly all have it removed.

These cases where I find a little scaly spot or a little

suspicious place on the lip or face I have no trouble at all in ninety-five cases out of a hundred to get them to take treatment right away or within a few days in the office where they are so easily cured and so surely cured, and the patients go away with that dread removed which they have to carry as long as there is a sore that won't heal and remain healed. That is all the diagnosis I try to make, not whether it is a prickly little carcinoma or sarcoma or something else because that makes little difference.

If you cut out a piece to microscope and it is malignant, you have done that patient an irreparable harm, while if you fulgurate that you know it is cured. There is no trouble to get them to submit in ninety-five cases out of a hundred. (Applause.)

PRESIDENT SLEYSER: Dr. McMahon.

DR. McMAHON: I do not quite share the pessimism of Dr. Ground regarding the progress of surgery in the treatment of cancer.

I believe a lot of progress has been made in the surgical treatment of malignancy, both superficial and of the gastrointestinal tract. I believe, of course, the primary requisite is early diagnosis and for that, the lay people be taught or educated to consult physicians early or else have routine repeated examinations, as the case may be.

Carcinoma is primarily a local lesion and whatever the cause may be, the successful treatment of it by any of the many methods that have been used and are approved will depend upon the application of that treatment at such time as it is still a local lesion, preferably. If the lesion is advanced, the skin lesion for example, or the glands are involved, there must be some effort made at destroying these lesions. The success you meet with will depend to a large degree upon your experience and upon the nature and the extent of the pathology present.

In the treatment of any carcinoma, whether it be superficial or deep, whether it involves a cutaneous or a buccal surface, a gastric or an intestinal segment, as Dr. Deoge spoke of, the methods or a combination of them must be adapted to the case and not the case made applicable to some pet method or mode of attack, and the result will be that more successes will be obtained.

In the malignant lesions of the skin I believe the dermatologists sees many of these lesions and cures them and we hear no more about them, so we do not see them at all. From their experience they can tell in the early or possibly in the fairly advanced cases whether or not some form of conservative treatment will be of any value and if it is not of value or if they recommend some other adjunct to employ in conjunction with their armamentarium, I believe that it should be employed.

Regarding papilloma of the bladder, if I may mention a word about Dr. Nuzum's paper in which I was very much interested, the benign papillomas or rather the early papillomas are relieved and possibly cured by so-called electro-desiccation or fulguration through the cystoscope. After these papillomas have become histologically and clinically malignant, I believe that the simple fulguration or electro-desiccation of these lesions probably will not go deep enough. Some one of the more radical methods of a direct attack by means of a supra-pubic cystostomy in exposing the pathology to the sight and to the feel and then applying some form of heat destruction whether it be a resection of the part of the bladder with the Percy cautery or whether it be electro-coagulation or whether it be the application of radium or radium needles into the lesion, is a better method of choice.

Dr. Ground presented a very interesting paper and I think we are all indebted to him. He misunderstood me with reference to the use of the radio knife. The radio knife is nothing but the high frequency electric current applied at a small point and used for dissection and excision purposes, and it can be used in the excision of lesions where the tissues are close to important structures that must be conserved and a deep slough avoided as would be obtained if we used the Percy cautery or the electric iron or the electro-coagulation method.

(Continued on Page 199.)

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C. Councilors and Officers of the State Society. Address the individual.

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EDITORIALS

THE CLINICAL HISTORY

THE securing of the clinical history of a case is looked upon by many physicians as an unnecessary time consuming drudgery. The insistence, by the hospital, of a proper clinical history, in writing, is sometimes, in turn, considered a presumption. In consequence the details of a complete history are often left to an assistant or an interne, while the more dramatic, modern diagnostic methods are carried out by the attending physician.

This tendency to give undue importance to certain clinical laboratory findings and to permit comparative disregard to the details of the history, is well shown by the habit of patients bringing reports of examinations of blood, urine, gastric contents or X-ray films to the doctor expecting a diagnosis therefrom. If not downright resentful, they are likely to be non-cooperative regarding the recital of their symptoms. They are very prompt to recite previous "diagnoses" (?); but reticent regarding the symptomatology behind these often meaningless names.

Either because of, or in spite of the profession, the patients today expect, in many instances, to have some machine or some dramatic test make the diagnosis; while the development of a proper history in some quarters is rapidly becoming a lost art.

The importance of the history may be emphasized by reminding that all real therapeutic endeavors must be preceded by a diagnosis and that the diagnosis rests upon three supports; the history, the physical examination and clinical laboratory findings. The greatest of these is the history.

The history is not sufficient within itself, neither may it be omitted. A history to be of value must be given serious consideration in conjunction with the results found at the physical examination and the reports of the various laboratory tests. The diagnosis is the result of such study. But in order that this serious consideration may be given to the story of the patient the history must, obviously, be in writing.

A complete history is essential to a correct diagnosis in most chronic cases (in certain acute emergencies the history is, of course, of comparatively small import at the time). The family and previous history and the detailed story of the present

complaint may reveal important diagnostic facts that could not be learned by repeated physical examinations or any of the various clinical laboratory or examinations or tests.

As a single example: In an attempt to differentiate between functional and organic disease of the stomach, a complete history may be of more value than would be a gastric analysis. The history must not be confined to a story of the chief complaint, but must be inclusive and as it has been expressed, "must consider the somatic, the psychic and the social reaction of the individual to his environment". This is a large order and one that cannot be well filled by an assistant, nor can it be overlooked by the physician who aims to get at the bottom of things and is not satisfied merely to remove or relieve symptoms.

It will be found that the time invested in securing an inclusive history will often pay very satisfactory dividends in increasing the percentage of correct diagnoses, which automatically leads to more satisfactory results.—F. G. C.

THE PROBLEM OF SECURING NURSES

THE problem of securing an adequate number of bedside nurses of sufficient capacity to meet reasonable demands, and this at a cost within the means of the average patient, is taking an acute form in some sections of the United States. In New York, for example, a committee has been appointed to study the very complex problem thoroughly and report a year hence.

One hears occasional mutterings on the question here and there in Wisconsin, also, but we seem to have evaded thus far, any of the acrimony that has sometimes marked the discussion elsewhere. It should be avoided. For the medical profession's efforts to "voice its own standards" are constantly cited as their prototypes by our sisters of the nursing profession. Nevertheless, the primary interest that must be considered, throughout, is the *patient's interest*. Professional interest, whether it be of the physician, nurse, lawyer or who not is a secondary interest.

We hold with the most enthusiastic educators that the most intelligent nursing is none too good for the sick. But if the cost of such, for one or another practical reason, becomes absolutely prohibited, somebody will have overreached the prac-

ticality of high educational standards. As in most other fields, it would seem that the exigencies of the situation will require a system of grading supply to the pocketbooks of the employers.

It is manifestly absurd to talk the high engineering standards of Rolls Royce automobiles to a family whose budget must be strained to meet the payments on a "little old last year's Ford". Quite so in nursing. But that isn't all of it. There are situations in which the Ford is actually more useful and satisfactory than a Rolls Royce can be. Similarly, these are nursing situations in which it would be manifestly unfair to the nursing profession itself to waste the highest standards on cases requiring only an ordinary "garden variety".

These are observations which are recognized and will be admitted by everybody concerned just so long as they do not get excited and emotional. Above all else we, of a scientific profession, should not be ruled by generalities; but should insist that all our problems should be solved, so far as possible, by the scientific method. H.E.D.

MUSINGS

STRICTLY speaking, the following is not a conventional editorial. We have decided, however, to give it editorial position on account of the importance in which we hold at least some of the "Musings". A proper sense of modesty might also dictate that we blue-pencil the words of approval for the work of the present editors. Being more human, however, than modest, we have decided to "give them a ride" along with the musings and sentiments which we can fully and unblushingly endorse.

"Reading rather carefully the August number of the Wisconsin Medical Journal, which by the way is a most excellent and praiseworthy production, I could not help musing on the progress made by the medical profession in Wisconsin. The original articles in the Journal are highly scientific and withal, practical. The letters from abroad, especially the final letter of Dr. Warfield, is very interesting and recalls that within the last year or two we have had some very interesting communications from members of our Society abroad. The editorials are pointed and raise questions of vital importance to the general practitioner.

"The selection of Osler and Trudeau is inspirational. The article by a young practitioner—"Bubbles"—is thought-provoking. He wields a

caustic as well as a trenchant pen. Some of his phrases are sharp and ironic, almost worthy of Juneau, and since the editor blue-penciled it so little, it is just as well perhaps that he omitted his name.

"The amount of work that 'George' asks us to let him do is boundless, and I wonder if it is not just possible that we are not co-operating with such a willing worker as we should.

"The preliminary program is beyond question of a most scientific character; but do not think that I am implying that it is not just right. It should be a splendid stimulus to the rank and file of the profession. The character of the papers, and the standing of the men on the program should show us how far scientific medicine has gone and how absolutely it is based on the fundamental biologic sciences. We need this awakening. The general introduction and the arguments introducing each day's program are worthy of a Jesuit disputation, by which I mean that they are fundamental, logical, and might I say, brilliant.

"These musings lead me to reminisce over the past third of a century that I have been more or less active, if we are prone to forget those who, in the earlier days, made possible this progress in our Society. Always there have been men who by vision and self-sacrifice have made this progress possible. The old Journal was always *good* and we must not forget the men, whom I need not name, that under great difficulties, made it an organ worthy of the State Medical Society of Wisconsin, and who always kept the torch of progress high before us.

"We are proud of the men who have put our State Society in the forefront. We are prouder of the men who, under great difficulties, have carried on through all those years and made this possible."

—E. E.

A COMMENDABLE ENTERPRISE

YOU use the word hygiene almost daily—Where does the word come from? Do you know? Panacea—another word used in medicine very frequently—What is its history and meaning? Who was Helios? Hippocrates? Aesculapias? Since the war most of us have become quite familiar with the little emblem worn on the collar band of all officers of the United States Medical Corps—the Caduceus. Do you know the history of this emblem? How does it differ from the emblem of the American Medical

Association seen today everywhere on physicians' cars.

Who was the first man in America to confirm the experimental work of Robert Koch, as a result of which, he announced the discovery of the tubercle bacillus?

If you are interested in the mythology and early history of your profession, watch for the October *Crusader*. Mrs. Louise F. Brand, Director of the Publication Department of the Wisconsin Anti-Tuberculosis Association, conceived the thought that the children of this state little realize the tremendous advantages they enjoy as result of the work of our pioneer physicians. She seeks to remedy this condition by an enterprise that merits our thoughtful attention and hearty commendation.

Effective in October, the health calendar of the Association sent to the 7,000 rural and state graded schools of this state, will be dedicated to "Great Physicians, Benefactors of Mankind." On the back of each calendar, sent monthly throughout the school year, there will appear pictures of our pioneers in medical science. With each calendar there is sent an eight-page leaflet to the teacher telling of the work of that particular physician and of that accomplished by other men of his time. We particularly desire to call your attention to this leaflet.

We congratulate the Association and Mrs. Brand, for the work they thus undertake. It is truly an educational work that will go far to tell our growing generation something of the great accomplishments of scientific medicine, and in turn reflect a deserved credit upon the work of our physicians of today.

(Continued from Page 195.)

Now electro-coagulation is simply an approved method, I believe, of heat destruction in certain types of selected cases of malignancy and also in certain cases of benign tumors and also in certain cases of chronic inflammatory processes. It is capable of destroying any cell that it comes in contact with. The difficulty lies in estimating the depth of the penetration and in estimating or rather saving the damage that would be done otherwise. It blocks the lymphatics as you go along. We can remove an arm or a leg, or any part of the body, by means of electro-coagulation or diathermy machines that the manufacturers put on the market. It isn't the fault of the method that we have failures, but because patients are coming at an advanced stage when the disease is too far advanced to be destroyed with safety. I, therefore, submit and urge that we use it as an adjunct to other treatment or treatments in some of these selected cases or as a substitute in some of these cases. (Applause.)

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PEMPHIGUS OF THE THROAT

By R. A. BARLOW, M. D.

Madison

The picture of pemphigus of the pharynx is not generally visualized by the nose and throat specialist when he considers the conditions that may bring a patient to him with the sole complaint of sore throat. Yet, the blebs first appear in the mouth and throat in 60 to 65 per cent of cases, and the patient consults the laryngologist primarily because of symptoms referable to the oral lesions. Because, at times, the lesion in the pharynx manifests itself only as a sore throat with scarring, the otolaryngologist may fail to recognize it as a clinical entity and may diagnose it either as a luetic manifestation or catalog it as some indefinite chronic disturbance.

Pemphigus is essentially a bullous disease characterized by the formation of variously sized, round or oval blebs with or without constitutional manifestations. It is true that other diseases are associated with blebs; for example, pompholyx, eczema, dermatitis herpetiformis, dermatitis venenata, urticaria bullosa, and erythema bullosa (multiforme); but the blebs of pemphigus are characteristic and distinct in that they are watery and more or less generally distributed without special tendency to group. The disease, as a rule, runs a chronic course with acute exacerbations.

There are a number of varieties of pemphigus, distinguished by such descriptive adjectives as benignus, hemorrhagicus, and so forth; but in this paper I do not intend to dwell in detail on a description of the various forms.

ETIOLOGY

The etiology of pemphigus of the pharynx, like that of generalized pemphigus, is decidedly obscure. Various organisms have been found more or less constantly, but oddly enough the findings of various investigators lack uniformity. Bowen compares pemphigus with foot and mouth disease in cattle. The bacillus *pyocyaneus* has been described as the causative organism, and a diplococcus has also been found. Ebersson, in 1923,

isolated a gram positive, anaerobic, nonmotile, coccoid organism in seven cases, but was unable to substantiate the findings in a sufficient number of cases to establish the relationship unqualifiedly. In the case reported herein, Stoval consistently found a diphtheroid organism in studies extending over a period of two years. Pemphigus is thought to be infectious because, in many cases, the beginning lesions are found in the mouth. Goldenburg and Highman found the mouth and throat to be the sites for the initial lesions in eighteen of thirty cases. New has observed nineteen cases at the Mayo Clinic in which there were throat and pharyngeal lesions. One Japanese writer has stressed the part of the endocrines in the etiology of pemphigus, but his theory amounts to little more than a conjecture.

CLINICAL PICTURE

In pemphigus of the pharynx, as in many cases of generalized pemphigus, the patient gives a history of good health until a few months before onset of severe sore throat. The condition resists all forms of treatment and is not associated with marked glandular involvement. The patient usually complains of "sore eyes" and the conjunctivae show definite inflammatory changes with symblepharon and entropion. The conjunctival lesions are not unlike those of trachoma and, indeed, some patients with pemphigus have been treated for trachoma. The characteristic trachoma bodies, however, cannot be demonstrated in pemphigus, nor does trachoma involve other mucous membranes than the conjunctivae. Brocq says that pemphigus may occur in the conjunctivae years before bullae appear. In such cases trachoma must be ruled out in the differential diagnosis. The nasal mucosa may or may not be involved.

The mucous membrane of the pharynx shows marked hyperplasia with many cicatricial bands and scars, even the pillars being involved. The scarring with contraction strongly resembles that observed in an old luetic pharynx. A fibrinous membrane forms which is fugitive in character. Eventually small blebs appear at some point in the pharynx: on puncture the blebs yield a thin straw-colored fluid which is sterile on culture. Careful general examination will frequently reveal similar lesions in the vaginal or rectal mucosa. The presence of blebs must be demonstrated to establish a diagnosis.

TREATMENT

All forms of local treatment which have been tried have given little or no relief. The best results are obtained by the oral administration of some form of arsenic, such as Pearson's solution, Fowler's solution or salvarsan. Various physicians report that cacodylate of iron and coagulen, as well as Pearson's solution, give relief.

PROGNOSIS

The prognosis is practically 100 per cent fatal. In almost all cases reported up to the present time the patients have died within three years. Generalized pemphigus has usually developed before death.

REPORT OF CASE

Mrs. B., aged fifty-seven, came to the Wisconsin General Hospital February 21, 1925, for examination because of constant sore throat of four years' duration. Several times during a period of two years swab cultures had been made and sores in her throat had been punctured by a physician in northern Wisconsin and the contents had been sent for culture to Dr. Stovall, Director State Laboratory of Hygiene, of the University of Wisconsin. A diphtheroid bacillus had been found repeatedly.

General examination revealed a woman in advanced life, poorly nourished and somewhat emaciated. The Wassermann test was negative, and examination of the chest failed to show any evidence of tuberculosis. The blood count was within normal limits.

It was noticed that the eyes were causing discomfort, and examination revealed marked thickening of the lids and conjunctiva, entropion and symblepharon, and acute conjunctivitis on the right. The membrane of the nose was covered with large crusts such as are seen in ozena. The tongue was smooth. The pillars and pharyngeal mucosa were markedly scarred and showed areas of hyperplasia. A pseudo-membrane extended well down to the epiglottis, but did not involve the cords. A swab culture of the throat revealed a diphtheroid bacillus which did not develop in rabbits.

Although the first examination did not reveal blebs, after observation for several days two large blebs appeared, one on the posterior pillar and one on the left lateral band. These were punctured and a straw-colored, sterile fluid was evacuated. A swab culture at this time revealed mixed infection, with no predominating organism.

Lesions similar to those observed in the throat were found in the vagina. A number of scars were noted on the skin of the forearms and hands and the patient said she had had eczema. During her stay at the hospital she developed a palmar lesion which was diagnosed as lichen planus.

DISCUSSION

This case is particularly interesting from the point of differential diagnosis. Tuberculosis was excluded on the negative chest findings. The throat has as yet not been accepted as a primary location for tuberculosis.

Traumatic scarring was excluded by the history. The swallowing of a corrosive or extremely hot food or the inhalation of some escharotic gas might produce the picture, but such a cause for the scarring would be brought out in the history.

Ulcerative gumma in a luetic pharynx would produce the clinical picture observed, but we should also find the other concomitant signs and symptoms of a late syphilitic manifestation.

Myelogenous leukemia sometimes presents such a picture, but the blood count would bring that out.

Malignancy would be associated with more destruction of the parts involved and more glandular involvement; the chronicity of the malady would rule that out.

Lichen planus is commonly seen in the throat, but does not produce blebs. It must be conceded that the patient reported might have two conditions: lichen planus on the hand and pemphigus of the throat. This is the stand the writer assumes until something more conclusive can be proven.

The patient was put on Fowler's solution, but as yet there has been little or no improvement. It is my belief that with the pain on swallowing and the general tendency to undernourishment, she will in a short time develop generalized lesions which may terminate fatally.

SUMMARY

Pemphigus of the throat is a comparatively rare finding, but should be watched for by every physician. The appearance of a scarred pharynx, with a history of sore throat of long duration and pain on swallowing, the formation of a pseudo-membrane and blebs in the absence of other conclusive findings of tuberculosis, leukemia, or lues should establish the diagnosis of pemphigus.

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NEW MEDICAL LAWS PUBLISHED

The State Medical Society is publishing a codification to embody our present statutes covering the field of "Treating the Sick." This is being published in two issues of the *Journal*. In the mean time any desiring a copy of this codification may secure it by addressing the Secretary, 558 Jefferson Street, Milwaukee. The codification is not an "official publication" but is believed to be correct in every detail.

PREVENTIVE MEDICINE

Edited by

W. D. STOVALL, Chairman

Section on Preventive Medicine, State Medical Society of Wisconsin

The office of the Secretary of the State Society has been receiving an increasing number of requests for information as to the state's activities under the Sheppard-Towner act and the correlated activities that are maintained by the state itself. Upon request the State Board of Health furnished the following report dated July 1, 1925. It will be understood that this is but a brief summary of the work for the past six years and includes efforts made under both state and federal appropriations.—Editor's Note.

A program which has as its objective such an undertaking as the reduction of the maternal and infant mortality and the morbidity rates, must necessarily be a steady one, and the program has remained practically the same. It includes:

Child health conferences in sixteen Mother and Baby Health centers, and on the Child Welfare Special.

Prenatal conference.

Monthly prenatal letters to expectant mothers.

Promotion of classes in Infant Hygiene.

Distribution of printed material.

Loan of attractive posters and films to schools and organizations.

Lectures.

Advisory service to public health nurses.

It has been the policy of the bureau since its establishment in September, 1919, to concentrate each year on some one phase of the program, in order to firmly establish each part of the work, though keeping up activities along all lines.

1. The first year was devoted to organizing and standardizing the public health nursing service throughout the state, and the advisory service was established. This was considered of first importance because much of the child health work to be done depends upon the public health nurses.

2. Child health conferences were initiated the second year and the work started with one physician and one nurse on the Child Welfare Special.

3. During the third year another physician was added to the staff and sixteen county Mother and Baby health centers were established which were visited once every four weeks by the physician, and a nurse who was assigned to four counties.

4. The fourth year more time was devoted to

the Infant Hygiene Classes and through the co-operation of the Board of Vocational Education this work was made a regular part of the curriculum of the vocational schools. The prenatal letter service was initiated through circular letters to physicians offering the services for their patients.

Federal funds appropriated by the Sheppard-Towner Act were received in 1923 which doubled the appropriation and made it possible to increase activities without making any material change in the program. The Federal Board has maintained the policy of "no interference" in state plans of work.

5. Beginning with the fifth year, a full time organizer was employed to assist in preparing teachers to successfully conduct Infant Hygiene classes so that this could be made a part of the work in every public school. The State Board of Normal Regents made it mandatory for every normal school to give the student teachers adequate preparation for this work and the organizer spends from one to two days in every state and county normal school giving some intensive work and assisting in the establishment of the course on Infant Hygiene. The slogan "Every Wisconsin Girl Educated for Intelligent Motherhood" was adopted.

6. Beginning with the sixth year, prenatal work was emphasized, though prenatal conferences have been conducted from the beginning at the health centers. Special prenatal conferences are being held and physicians, nurses and lay people approached for cooperation in the distribution of more of the monthly prenatal letters.

THE CHILD WELFARE SPECIAL

The demand for the services of the Special increases. During 1923 and 1924 the following counties were visited (during 1922, 13 counties were visited) :

1923

Waukesha (1 week)	Pepin (1 week)
Washington (1 week)	Buffalo (1 week)
Fond du Lac (2 weeks)	La Crosse (2 weeks)
Manitowoc (2 weeks)	Crawford (1 week)
Wood (4 weeks)	Vernon (2 weeks)
Marathon (2 weeks)	Marquette (2 weeks)
Vilas (2 weeks)	Columbia (2 weeks)
Douglas (2 weeks)	Walworth (1 week)
Polk (2 weeks)	

1924

Columbia (1 week)	Price (3 weeks)
-------------------	-----------------

Ozaukee (2 weeks)	Lincoln (1 week)
Milwaukee (3 weeks)	Chippewa (2 weeks)
Winnebago (2 weeks)	Trempealeau (2 weeks)
Outagamie (2 weeks)	Jackson (1 week)
Waupaca (3 weeks)	Sauk (1 week)
Ashland (2 weeks)	Kenosha (3 weeks)
Iron (2 weeks)	Green (1 week)

In 1923, 4002 children were examined and in 1924, 5036 examinations were made.

Many physicians have shown interest in this phase of the work and have urged that return visits be made to counties until all have been visited, which will be during the next two years.

During the winter months of 1922 and 1923 the Child Welfare Special physician held one day child health conferences in 115 places.

MOTHER AND BABY HEALTH CENTERS

Following the original plan demonstrations have been carried on in 16 counties and a total of 4301 children and 339 expectant mothers examined and advised to July 1, 1924. No medical or surgical treatment is given.

The locations of the county centers have been changed from time to time to different parts of each county and following the removal of the state service, local Mother and Baby centers have been established in Colby, Fennimore, Janesville, Wausau, and Wisconsin Rapids.

A total of 25,807 children and infants have been examined since the establishment of child health conferences. Of this number 5498 were found to be normal and about one-third of the remainder could have been brought to normal by correction of faulty health habits. Others had progressed beyond this stage and were in need of medical and dental care.

It is the aim of the Bureau to demonstrate the Mother and Baby Health centers in a manner commensurate with the ability of the community to carry on. The wisdom of this has been proven by the establishment of the above mentioned five local centers.

INFANT HYGIENE CLASSES

Up to July 1, 1925, 7342 certificates had been issued to girls who have successfully completed a course of not less than ten lessons in Infant Hygiene. The full time organizer began work in March, 1924. Her time is being devoted to visiting Normal schools to assist in the preparation of teachers for carrying on the classes in public schools. She also talks to groups of

various types while in the communities where the schools are located.

The course is being given preferably to the sixth, seventh or eighth grades and the Superintendent of Public Instruction recommends that it be made "a part of the Wisconsin course of study in home economics, physical education, or physiology and hygiene for both rural and city grades. In rural schools this instruction will supplement the work as outlined for eighth grade physiology and hygiene for the eighth and ninth months."

A handbook for teachers of Infant Hygiene classes has been issued and a manual of Infant Hygiene prepared for use as a textbook.

MONTHLY PRENATAL LETTERS

Since the first issue of these letters 2175 expectant mothers have been on the mailing list. Of this number 1197 were sent in by physicians and 978 by nurses and others.

During 1925 another appeal is being made to all women's organizations and to physicians in an attempt to increase the registration of expectant mothers.

Letters of appreciation from expectant mothers who have received the monthly instructions indicate that every expectant mother in the State should be receiving them.

ADVISORY SERVICE TO PUBLIC HEALTH NURSES

(Not Sheppard-Towner)

The county public health nursing service was made optional by the 1923 legislature, but it did not result in any material reduction of the number of nurses employed. The number of nurses employed by local communities has shown an increase and the dependence of public health nurses on the State Board of Health for advisory service has grown until this part of the work has assumed large proportions.

From July 1, 1922, to September 1, 1922, there was no field advisory nurse on duty. From that time to April, 1924, there was one advisory nurse and since that time there have been two. One of these has been made Acting Director of public health nursing and the work of the bureau gradually divided between her and the director.

During the biennium 409 advisory visits have been made lasting from one to five days each. Monthly reports are received and much advisory service rendered by letter.

A mimeographed bulletin is issued each month

as a clearing of information between nurses.

PUBLICATIONS

A new leaflet on Diet for the Expectant Mother and a folder on Tonsils and Adenoids have been issued. A monthly supply of 250 Child, Infant and Prenatal Care and 1750 franked envelopes and labels are received free of charge from the Federal Children's Bureau, Washington, D. C. Other publications are received free of charge from the Children's Bureau such as Minimum Standards of Prenatal Care, Why Drink Milk, and so on.

PERSONNEL

- One director.
- Two full time physicians.
- One part time physician.
- Five mother and baby center nurses.
- Two field advisory nurses.
- One organizer infant hygiene classes.
- One driver child welfare special.
- Three stenographers.
- One bookkeeper and filing clerk.

SUMMARY OF FIELD AND OFFICE WORK

July 1, 1922—July 1, 1924	
No. of Individual letters written.....	8,827
No. of Circular letters issued.....	31,558
No. of conferences and meetings attended.....	160
District Public Health Nurses' Meetings held.....	9
No. of talks.....	553
No. of times films loaned.....	73
No. of times poster sets loaned.....	290
No. of advisory nurse visits.....	409
No. of schools visited.....	271
No. of home visits by health center nurses.....	2,415
No. of times model layette loaned.....	18
No. of sets of slides loaned.....	22
No. of children examined.....	17,066
No. of expectant mothers advised.....	524
No. of sets of prenatal letters.....	2,175
No. of publications distributed.....	219,817
No. of publications received free of charge from Washington, D. C.	60,000
No. of franked envelopes received free of charge from Washington, D. C.	40,500
Financial Statement	
Bureau of Child Welfare and Public Health Nursing.	
July 1, 1919—July 1, 1920.....	\$ 5,000.00
From State Board of Health general app.	
July 1, 1920—July 1, 1921.....	5,000.00
From State Board of Health general app.	
Total for biennium.....	\$ 10,000.00
July 1, 1921—July 1, 1922.....	\$ 21,100.00
By legislative enactment.	
July 1, 1922—July 1, 1923.....	31,100.00
By legislative enactment.	
July 1, 1922—July 1, 1923.....	10,938.04
Federal fund (from Sheppard-Towner Act).	
Total for biennium.....	\$ 63,138.04
July 1, 1923—July 1, 1924.....	\$ 23,000.00
By legislative enactment.	
July 1, 1923—July 1, 1924.....	27,751.62
Federal fund.	
July 1, 1924—July 1, 1925.....	23,000.00
By legislative enactment.	
July 1, 1924—July 1, 1925.....	27,751.62
Federal fund.	
Total for biennium.....	\$101,503.24
Refunds to U. S. Treasury.....	\$ 1,944.19
July 1, 1925—July 1, 1926.....	\$ 23,000.00
By legislative enactment.	
July 1, 1925—July 1, 1926.....	27,751.62
Federal fund.	
July 1, 1926—July 1, 1927.....	23,000.00
By legislative enactment.	
July 1, 1926—July 1, 1927.....	27,751.62
Federal fund.	
Total for biennium.....	\$101,503.24

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ORGANIZED 1841

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LIST OF EXECUTIVE OFFICERS OF COUNTY MEDICAL SOCIETIES

Table with 3 columns: County, President, Secretary. Lists 90 counties and their respective officers.

SOCIETY PROCEEDINGS

MARINETTE-FLORENCE

The Marinette-Florence County Medical Society held its annual picnic at Henes Park Wednesday afternoon, August 26th.

Mrs. Nadeau, Mrs. C. H. Boren, Mrs. Kaye, Mrs. McComb had charge of the refreshments, Drs. C. H. Boren and W. S. Jones the sports. There were about fifty present and all enjoyed the outing very much.

There were several doctors with their wives and guests from out the city present. Showing the popularity of this even among the profession. M. D. B.

ONEIDA-Forest-VILAS

Members of the Oneida-Forest-Vilas County Medical Society met at the Hospital, Rhinelander, at 4:00 p. m., Wednesday, August 12th. Dr. J. M. Dodd, Ashland, district councilor, spoke on the present trend in medical progress and medical organization. Mr. J. G. Crownhart, secretary of the State Society, told the members of the several fields of work of the society and emphasized the present aims.

The members present felt that in the future the society could hold a spring, summer and fall meeting. The next meeting will probably be held during the fall months.—I. E. S.

TREMPEALEAU-JACKSON-BUFFALO

The Trempealeau-Jackson-Buffalo Medical Society had a wonderful meeting at Whitehall, Aug. 7th. Dr. W. J. Mayo, Rochester, Minn., gave a practical talk on appendicitis. Dr. Donald C. Balfour of the Mayo Clinic discussed diseases of the stomach from the standpoint of the surgeon, while Dr. C. S. McVicar of the Mayo Clinic considered medical treatment of stomach disorders. Dr. McGuire, head of the Department of Surgery, University of Virginia, Richmond, discussed briefly gastric and duodenal ulcers. There was a large attendance and the members enjoyed the meeting very much. The society accepted the invitation of Dr. W. J. Mayo for a ride on the yacht "North Star" to Lake Pepin on the Mississippi River, Sept. 4.—R. L. M.

WALWORTH

The July meeting of the Walworth County Medical Society was held at Elkhorn on Thursday, the 30th. An interesting and instructive paper was read by Dr. Oscar Lotz of the Wisconsin Anti-Tuberculosis Association, Milwaukee. Dr. G. E. Hoyt, of the Public Health Bureau, spoke on the need of the county medical society cooperating with the county health committee in regard to goiter prevention.

The following officers were elected for the ensuing year: Dr. A. M. Leland, Whitewater, president; Dr. B. J. Bill, Genoa City, vice-president, and Dr. Carroll Rice, Lake Geneva, secretary and treasurer.

SECOND DISTRICT MEDICAL SOCIETY

A meeting of the Second Councilor District Medical Society. Kenosha, Racine, and Walworth Counties, was

held at Lake Geneva Tuesday, August 18th. Following a pleasant luncheon a short business meeting ensued. It was carried that the next president of Racine County Medical Society shall be president of the Second Councilor District Society. Dr. Susan Jones of Racine was elected secretary. A committee was appointed by the president, composed of the following, to reconstruct the by-laws of the society: Dr. B. J. Bill, Genoa City; Dr. C. Fulton, Burlington, and Dr. E. Ripley, Kenosha.

Mr. J. G. Crownhart, state secretary, vividly impressed upon the members the necessity of bringing county medical society interests into the district society meeting.

An interesting and instructive paper on "Duodenal Ulcer" was read by Dr. W. P. Finney of the Mayo Clinic.—T. P. K.

NINTH COUNCILOR DISTRICT

The mid-summer meeting of the Ninth Councilor District Medical Society was held at Wisconsin Rapids on the afternoon of August 4th. The session opened at the Country Club at four o'clock with a talk by Mr. J. G. Crownhart, executive secretary of the State Society, on the legislative work of the society in the interest of public health. Dr. J. L. Barber, senator from Marathon county, also spoke on the work in the legislature.

At the close of the afternoon session dinner was served, after which the meeting was resumed and Dr. Edward Evans, La Crosse, presented a paper on "The General Practitioner." Dr. Wilson Cunningham, Platteville, president of the State Society, spoke on "The Relationship of Medicine to the Public." Just before adjournment a group picture of the members assembled was taken. The following resolution was adopted:

"Whereas death in its majesty on July 6, 1925, deprived this society of one of its older and respected members, this society adopts a resolution deploring the untimely passing of Charles Chase Walsh of Merrill, Lincoln County, Wisconsin.

"Dr. Walsh was well liked and respected by all the members of the Ninth Councilor District Medical Society, this society feels that it indeed suffered a loss in the untimely death of one who had been so honorable, faithful and true to the ideals of his profession.

F. A. SOUTHWICK, M. D.

G. W. REIS, M. D.

D. WATERS, M. D."

The meeting was pronounced most successful. The attendance was forty-five.—J. F. S.

NEWS ITEMS AND PERSONALS

Drs. Carl A. Hedblom, A. S. Crawford and B. H. Hagen recently announced the opening of their offices in Rooms 203-204-205 of the First Central Building, Madison.

Dr. C. W. Bennett, Monroe, has left the hospital and has now returned to his home. Dr. and Mrs. Bennett suffered serious injuries a number of weeks ago when their car was struck by a train. They are now well on the way to recovery.

Dr. M. H. Rosenheimer, Sr., and Dr. M. H. Rosenheimer, Jr., have commenced suit against the Fidelity and Casualty Company of New York. The doctors allege that the company insured them against loss through suits arising from malpractice, but failed to defend them when two suits brought against them recently went to trial. The doctors are suing for \$10,000, the amount of their policies, and \$250 expenses and interest.

Authorities of Sheboygan county are seeking a swindler who posed as an asthma specialist and under this ruse fleeced William Nuss, Waldo farmer, of \$80 for what he called a "sure cure" for asthma. This "specialist," who called himself "Dr. Davis," obtained the names of a number of a Waldo physician's patients in some mysterious manner.

Several weeks ago a farmer living near Watertown paid two men, posing as physicians, \$100 for "services" similar to those received by Nuss. Carl A. Lapp, the farmer, contracted with the "specialists" to cure his son. One of the men gave his name as "Dr. Davis."

Dr. J. H. A. Foster, Cornell, together with his wife and two children, returned recently from an auto trip of three thousand miles through the northern part of the United States and in Canada. While at Toronto Doctor Foster took up special work on blood under the instruction of Dr. MacDonald, Canadian specialist. The trip consumed more than six weeks of time and was greatly enjoyed by the Fosters.

The second annual physiotherapy clinic was held at the Gillett hospital on July 30th. The clinic was conducted by Dr. C. M. Sampson, physiotherapist, of New York City. Dr. Sampson lectured throughout the demonstrations which were followed by a dinner at Hotel Gillett. In the evening the doctor presented a paper on "Static Electricity and Its Use," which was generally discussed by the doctors present. The following attended: Drs. W. E. Donahue and M. P. Andrews, Manitowoc; Drs. C. Reinick and W. W. Moore, Appleton; Drs. E. A. Miller and J. H. Murphy, Clintonville; Dr. John Kaye, Menominee, Mich.; Drs. C. H. Boren, W. J. Boren, and A. T. Nadeau, Marinette; Drs. Earl A. Linger, W. C. Stoelting, and N. A. Herald, Oconto; Dr. E. Gates, Two Rivers; Dr. G. W. Krahn, Oconto Falls; Drs. P. J. Noer and O. S. Tenley, Wabeno; Drs. V. Gosin, John Rose, S. F. Rudolph, and F. Crikelair, Green Bay; Dr. E. S. Elliott, Fox Lake; and Dr. C. F. Rehling, Fremont.

According to a bulletin issued recently by the Chicago, Milwaukee & St. Paul Railroad Company, Dr. Julius J. Bellin of Green Bay was made a road surgeon of that company.

Dr. C. C. Del Marcelle, Neenah, who suffered a broken back in an automobile accident about three months ago, is reported to have overcome serious kidney complications, which recently set in and to be gaining in strength at the Oshkosh hospital, where he is a patient. Though paralyzed from the waist down, Dr. Del Marcelle's general condition is now quite favorable, and he expects to be taken to his home in Green Bay within a short time.

Dr. Joseph P. Donovan, Madison, has joined the sales organization of the Neckerman agency insurance service. He has practiced in Madison during the past twenty-five years and was part time health officer for twelve years. For the last ten years he has specialized in eye, ear, nose and throat work. Dr. Donovan will now devote all of his time to insurance work, and will discontinue the practice of medicine.

Dr. and Mrs. A. R. Wilson of Milwaukee suffered painful injuries in an automobile accident on August 6th when the left front wheel of their car came off one mile south of Merrill on trunkline 10. The car turned over in the ditch. Dr. Wilson received a gash on the back of his hand and another cut on his forehead above his left eyebrow. Mrs. Wilson received a scalp wound on the left side of the head, about four inches long, and also a fracture of the left wrist.

Dr. W. B. Thewalt closed his practice recently at Berlin where he maintained his office in the Engelbracht Block. The doctor plans to make his future home and establish his office at Milwaukee.

A group of physicians spent the day at the State of Wisconsin General Hospital recently, where they attended the clinics and lectures given under the auspices of the University Extension Division of the University of Wisconsin. This meeting was the regular July clinic and lecture of the post-graduate medical extension course to which physicians have subscribed, and which is held during June, July, August, September, October and November in Madison, Green Lake, Brandon and Ripon. The physicians enrolled from the Green Lake-Waushara-Adams territory are: Drs. George Baldwin, Green Lake; Charles A. DeVoe, J. F. Riordan, B. E. Scott, A. J. Wiesender, W. B. Thewalt, Berlin; W. E. Buckley, Red Granite; R. H. Buckland, Fairwater; W. H. Fortner, Princeton; D. F. Hudick, Neshkoro; John S. Foat, J. M. Johnson, C. U. Senn, Orville O'Neal, Ripon; F. E. Shaykett, E. L. Shepherd, C. D. Shuart, Brandon.

Dr. Fred J. Hodges, Madison, who will have charge of the department of roentgenology at the new St. Mary's Hospital when completed, is on a four weeks' study tour with a number of x-ray specialists. Dr. Hodges will go to the Kellogg Sanitarium at Battle Creek, Mich., to the University of Michigan State Hospital, Ann Arbor, Mich., to Detroit, Mich., and Rochester, N. Y. In New York the doctor will study with Dr. L. G. Cole, a specialist in diseases of the stomach, and Dr. Percy Brown, formerly of Madison. His work in Philadelphia will be under Dr. W. F. Manges.

Dr. J. T. Speck, Park Falls, has sold his practice to Dr. J. D. Laehy of Butternut, who will take possession in the very near future. Ill health causes Dr. Speck to make this move, discontinuing all hospital work and giving up his practice, except office calls.

Dr. A. Sullivan of Madison will open an office in the Farmer's and Trader's Bank Building, Wrightstown.

Dr. G. E. Whalen, Milwaukee, has now returned after

working and studying in European clinics for the past three months.

Dr. A. E. Genter, surgeon, Sheboygan Clinic, Sheboygan, sustained a compound fracture of the left arm below the elbow in an automobile accident on August 17th, while he and Mrs. Genter were returning home on Highway 23. The car skidded in loose gravel on the road and turned over on the left side. Gas gangrene developed and two days later it was found necessary to amputate the arm, the operation being performed at St. Agnes' hospital, Fond du Lac. Dr. Genter's condition is reported as very satisfactory.

Dr. Patrick G. McGill, city health commissioner of Superior, returned recently from his vacation. Dr. McGill, with his wife and son, traveled extensively through eastern Canada.

MARRIAGES

Dr. B. Spaulding Hill, head of the eye, ear, nose and throat department at the Kenosha Clinic, Kenosha, and Miss Grace Marguerite Mattern of Mara, Pa., were married on July 25th.

The marriage of Dr. Edward F. Mielke, Appleton, and Miss Beulah Connell, Waukesha, took place on the 18th of August.

Dr. Francis Malone, Waterford, and Miss Gertrude DeKelder of Rochester were united in marriage on August 17th at Chippewa Falls.

DEATHS

Dr. Gustave F. Berger, died at his home in Chicago Tuesday, August 4th. Dr. Berger was born in 1867 and was graduated from Rush Medical College in 1897. He received his early education in Milwaukee, and later moved to Chicago where he has practiced with his son, Dr. Alvin Berger, for the past twenty-eight years. He is survived by his wife, and son.

Dr. L. G. Rupp, Concord, died on August 18th. Death was due to erysipelas. Dr. Rupp was born in the year 1878 and graduated from the Wisconsin College of Physicians and Surgeons, Milwaukee, in 1905. He was a member of the Jefferson County Medical Society, the State Medical Society of Wisconsin and the American Medical Association.

Dr. Edgar J. Gibson, of Fort Atkinson, died at his home on August 14th after a long illness. He was born at Clinton, N. Y., August 18, 1855, and forty-one years ago came to Fort Atkinson where he has since resided, serving for twenty-six years as health officer of that city. Dr. Gibson is survived by his wife and two children.

SOCIETY RECORDS

NEW MEMBERS

Kelley, J. A., Chippewa Falls.
Teschner, Paul, Cecil.
Kerschler, E. J., R. R. No. 2, Casco.
Shilliday, Wm. J., Hiles.
Allen, A. L., Norwalk.

CHANGES IN ADDRESS

MacMillan, Angus E., Stevens Point, to Chehalis, Wash.
Thewalt, W. B., Berlin, to 2927 Chestnut St., Milwaukee.
Montgomery, J. L., Milwaukee, to 705 Cobb Bldg., Seattle, Wash.
Slaney, Andrew F., Milwaukee, to Stockbridge.
Phelps, E. J., Grand Haven, Mich., to Elderon.
Clark, I. F., Durand to Eau Galle.

CORRESPONDENCE

American Medical Association,
Chicago, Ill., August 17, 1925

Mr. J. G. Crownhart, Ex. Sec.,
State Medical Society of Wisconsin,
558 Jefferson Street, Milwaukee, Wis.

Dear Mr. Crownhart:

The State Medical Society of Wisconsin has rendered a public service in codifying and publishing the Wisconsin statutes covering the field of "Treating the Sick." I thank you for the copies of that codification that you sent to me.

Sincerely yours,

W. C. WOODWARD,

Executive Secretary,

Bureau of Legal Medicine and Legislation.

WCW:DF

La Crosse, Wis.

Aug. 16, 1925.

"Enjoyed the August number of the Journal very much. It is getting better every issue."

DR. ROBERT E. FLYNN,

Secretary,

State Board of Medical Examiners.

LEGISLATIVE REFERENCE LIBRARY

WISCONSIN FREE LIBRARY COMMISSION

CLARENCE B. LESTER, *Secretary*

MADISON

August 15, 1925

Mr. J. G. Crownhart,
The State Medical Society,
558 Jefferson Street,
Milwaukee, Wisconsin.

Dear Sir:

I am enclosing a list of the people who have written to us during the week just ending for my digest on vaccination laws. Owing to your courtesy in supplying us with reprints from the Medical Journal, we have been able to supply these requests and the earlier ones, and every time a new request comes in we appreciate anew your generosity.

Very truly yours,

LUCILE MCCARTHY,

Legislative Reference Library.

LMC:C

PERSONS TO WHOM DIGEST ON VACCINATION
LAWS HAVE BEEN SENT

During the week August 10-15.

Sophia J. Lammers, Lib., Dept. Library of Commerce & Economics, Northwestern University Library, Evanston, Ill.

Ohio State University Library, Columbus, Ohio.

Nebraska Legislative Reference Library, University of Nebraska, Lincoln, Neb.

Eleanor F. Lewis, Reference Librarian, Northwestern University Library, Evanston, Ill.

Harrison J. Conant, Vermont Legislative Reference Bureau, Montpelier, Vermont.

TREASURY DEPARTMENT

INTERNAL REVENUE SERVICE

MILWAUKEE, WIS.

August 8, 1925

Mr. J. G. Crownhart,
Executive Secretary,
The State Medical Society,
558 Jefferson Street,
Milwaukee, Wisconsin.

Dear Sir:

Thank you for the list of physicians who have been licensed to practice medicine and surgery in Wisconsin as a result of the June-July examination. Your cooperation in our work is appreciated.

Yours very truly,

R. J. NYE,

Federal Prohibition Director.

LEM

June 26, 1925.

Mr. J. G. Crownhart,
The Wisconsin Medical Journal,
Milwaukee, Wis.

My dear Mr. Crownhart:

In the May issue of the Wisconsin Medical Journal, "Modern Aids to Labor," by W. B. Hendry states that the method of analgesia as developed at the Lying-In Hospital of New York City was used at the Burnside Lying-In Hospital in forty-two cases. "In this series two of the babies were still-born and the method must take the responsibility for this unfortunate result." He further states that the method is not without danger to the child, and that "in 22 inhalations of C. & E. were required towards the end of the second stage."

The method as outlined by Dr. Hendry is not the method as developed at the Lying-In Hospital, inasmuch as we do not advocate chloroform either with or without ether when this method is used. In changing the technic, it is only fair that Dr. Hendry should take the blame for the unfortunate results and not the method. Over two hundred patients are analized by this method at the Lying-In Hospital each month. We are now approaching two thousand cases. Dr. Asa B. Davis, the Surgeon-in-Chief of the Hospital, states that, "I have yet to know of a case wherein either mother or child was in any way injured by this method."—(The American Journal of Obstetrics and Gynecology, St. Louis, Vol. VIII, No. 2, August, 1924.)

We confidently believe that if the technic is followed as detailed, there is not the slightest danger to either mother or child; neither does the patient "require special

attention on the part of the obstetrician or the nurse." In the directions we emphasize the one great danger is "to superimpose an anesthetic upon a partially analgized patient." I am enclosing details of technic as now used, and would appreciate it greatly if you would publish them.

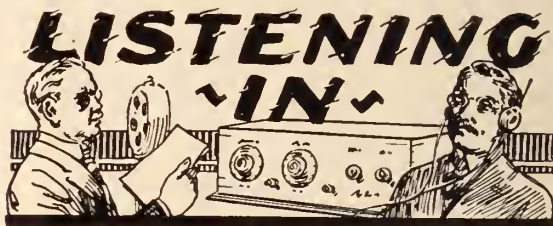
Very sincerely yours,

JAMES T. GWATHMEY,

40 E. 41st St.,

New York City.

JTG:EES



**LISTENING IN
Must Register**

A physician must register in each county in which he practices. This was the ruling of Attorney General Ekern given this month at the request of the State Society through Dr. Robert E. Flynn, Secretary of the state board of medical examiners.

The case arose in western Wisconsin. A physician moved from a county in which he had long been practicing to a county nearby. The Attorney General held that he must register his license anew with the county clerk of the county to which he has moved. The opinion supercedes a former ruling that this was not necessary.

It Pays to Pay

In a letter from the State Prohibition Commissioner, the statement is made that any Wisconsin physician in arrears for state permits will not be granted a 1926 permit.

Experience has shown that in the majority of the cases the delinquencies are due to a misunderstanding of the old separate permit law. The new single permit law becomes effective January first next.

"Members Only"

During August a large industrial concern asked the Secretary for a list of all physicians in 189 cities and villages of the state for the purpose of compiling their panels under the Workmen's Compensation Act. The representative of the concern stated that he did not want the name of a single one who was not a member of his county and state medical society.

"We only want those on our panels that are reputable and who thus belong to their State Medical Society—in other words who are interested enough to keep abreast with medical progress. Membership in their State Society is the best check on that."

This is the second request of this type received and filled within the past year.

Seventy and One Hundred and Fifty

At the Wisconsin Rapids meeting of the Ninth Councilor District Society, your Secretary noted that Drs. Bayer, Kelley, Morris, Winneman and Friend, all of Merrill, were present. It is seventy miles from Merrill to Wisconsin Rapids.

Comment: The Ninth Councilor Society is holding meetings that make a seventy mile drive profitable. And members who will drive seventy miles are making it possible for such profitable meetings.

During the same month, Dr. Dodd as Councilor drove one hundred and fifty miles to attend a meeting of the Oneida-Forest-Vilas County Medical Society at Rhinelander. That needs no comment.

Not the Caduceus

A member recently inquired if the A. M. A. auto emblem was not in error when it showed the rod with but one serpent. He pointed out that the caduceus had two serpents.

Dr. Olin West, Secretary and General Manager, responded by saying that the caduceus was not the authentic sign. He said "the caduceus is a design adopted by certain organizations, as the Army Medical Corps, etc., but the old symbol is the rod and one serpent."

For those whose study of mythology has not been recent—the emblem of the A. M. A. is the staff of Aesculapius. It is also the emblem of the Royal Army Medical Corps of England.

Will Be Represented

At the 1925 session of the Wisconsin Legislature there was authorized a special interim committee on Administra-

tion and Taxation. Members will be interested to know that their State Society has been invited to appoint representatives to assist this committee and to present the views of the medical profession on the particular problems with which they are most familiar.

Want Our Program

Since the most favorable comment in the Journal of the American Medical Association on the Wisconsin program for the September annual meeting, the Secretary's office has received requests for copies of the program from all parts of the country. The extra copies of the August Journal were exhausted within a few days and reprints had to be run.

When the Journal of the A. M. A. believes a state program is worthy of such comment as was given, the meeting at which that program is to be presented deserves your attendance.

Full Three Day Program Promises Exceptional Annual Meeting; Entertainment Planned for Each Day

Beginning with a championship golf tournament on Tuesday, September 15th, complete plans for the 79th Annual Meeting at Milwaukee are now announced. That the members may better visualize the entire program it is given herewith by days.

On Tuesday, the 15th

Tuesday morning Dr. M. L. Henderson and his medal winners will hold the first real golf tournament in the history of the Society. Entries must be made by Saturday, September twelfth.

A permanent medal for the winner, a Society cup, and a consolation cup are the prizes. Luncheon will be served at the club and is included in the three dollar entry fee. All desiring to enter should advise Dr. Henderson, Wells Building, Milwaukee. They will be notified of course selected and hour at which play begins.

At five Tuesday afternoon the Council will meet at Hotel Pfister to clear the decks for the first meeting of the House of Delegates, Red Room, Hotel Pfister at seven-fifteen Tuesday evening. Following the meeting of the House, arrangements are being made to provide the members with returns of the primary election for U. S. Senator.

On Wednesday, the 16th

The large exhibit and registration open at eight in Kilbourn and Walker Hall, Milwaukee Auditorium. The first scientific session opens at nine. The afternoon session starts at one-thirty.

At seven sharp Wednesday evening the House of Delegates will hold its second session at Hotel Pfister adjourning at eight to the Socio-Medical Smoker. The Smoker will include talks by Dr. Otho Fiedler, President of the State Board of

Health; Dr. M. L. Harris, Chairman of the Judicial Council of the American Medical Association; Dr. John M. Dodson, Editor of Hygeia, and then there is the surprise party in honor of a member—no further detail furnished.

On Thursday, the 17th

The Delegates will meet at eight-fifteen at the Auditorium for election of officers for 1926 and the scientific sessions open promptly at eight-thirty. Thursday noon the Marquette alumni will hold their luncheon at the Athletic Club, Illinois (P. and S. of Chicago) at Hotel Wisconsin, University of Pennsylvania at the Wisconsin Club, and other college groups as announced in the final program to be distributed at the meeting. And while the alumni luncheons are in progress the Presidents and Secretaries of the county societies and officers of the State Society will have a special luncheon in the Auditorium Building. Dr. F. C. Warshuis, Michigan, will open a discussion at the officers' luncheon on ways to make program material available to the county societies.

The afternoon scientific session will open at two. Thursday evening, six forty-five, the Society members and their wives and guests will hold the Annual Banquet in the Fern Room of Hotel Pfister. At the banquet President Wilson Cunningham, Platteville, will give the President's Address speaking on "The Origin and Progress of Medicine."

Promptly at nine the floor will be opened for dancing to the tune of the best dance orchestra in Milwaukee. Card tables and all accessories will be provided in an adjoining room for those who prefer cards to dancing.

On Friday, the 18th

The last day's scientific sessions will open at

eight-thirty and again at one-thirty. The Friday afternoon program will conclude the meeting and

will probably finish the Chairman of the Program Committee and the Secretary.

Final Program for Scientific Sessions September 16-18 Announced; Opening Discussors Appointed

With the selection of those who will open discussions, final arrangements for the scientific sessions of the 79th Annual Meeting are now complete. All morning sessions have been carefully timed which will prove especially attractive to those members residing in Milwaukee county.

With the statement that discussions will add greatly to the benefit of the meeting and that time has been allotted for full discussions of all subjects, the Program Committee makes a special appeal to the members to come prepared to take an active part in the sessions. In this connection Dr. J. L. Yates, Chairman, stated that members will find the synopses of papers as printed in the August WISCONSIN MEDICAL JOURNAL will prove helpful in working out the main points for discussion.

The first scientific session will open at nine Wednesday morning, September sixteenth. This will give the members an opportunity to register in the exhibit hall, just opposite the hall in which all scientific sessions will be held. With the exception of Thursday afternoon, all afternoon sessions will open at one-thirty. Because of the several luncheons Thursday noon, the afternoon session will open at two. The outlined program follows:

SCIENTIFIC PROGRAM Juneau Hall, Milwaukee Auditorium Wednesday, September 16th 9 A. M.

1. 9:00—*General Biologic Considerations* (Illustrated)—M. F. Guyer, Ph.D., Professor of Zoology, University of Wisconsin.

2. 9:20—*Biologic Basis of Immunity*—K. E. Kassowitz, M.D., Clinical Director, Muirdale Sanitarium, Wauwatosa.

3. 9:40—*Influence of Ductless Glands Upon Biologic Reaction*—E. C. Kendall, M.D., University of Minnesota, Mayo Foundation.

4. 10:00—*Biologic Aspects of Pathology*—C. H. Bunting, M.D., Professor of Pathology, University of Wisconsin.

5. 10:20—*Heat and Exercise: Their Influence Upon Competence of Cells and Individuals*—A. J. Carlson, M.D., Professor of Physiology, University of Chicago.

6. 10:40—*Light and Food: Their Influence*



Upon Competence of Cells and Individuals—H. Steenbock, Ph.D., Professor of Agricultural Chemistry, University of Wisconsin.

11:00—Discussion of Papers 1, 2, 3, 4, 5 and 6 opened by Edward Evans, M.D., La Crosse. (10 minutes.)

1:30 P. M.

7. *Rollier's Methods of Treating Tuberculosis of Bones and Joints with Sunlight and Active Motion* (Illustrated)—E. A. Fletcher, M.D., Milwaukee.

Discussion opened by K. E. Kassowitz, M.D., Clinical Director, Muirdale Sanitarium, Wauwatosa. (5 minutes.)

8. *Experimental Studies of Bone Healing* (Illustrated)—F. D. Geist, M.D., University of Wisconsin.

9. *Biologic Methods Applied to Fracture Therapy* (Illustrated)—G. W. Stevens, M.D., Milwaukee.

Discussion of Papers 8 and 9 opened by Jos. F. Smith, M.D., Wausau. (5 minutes.)

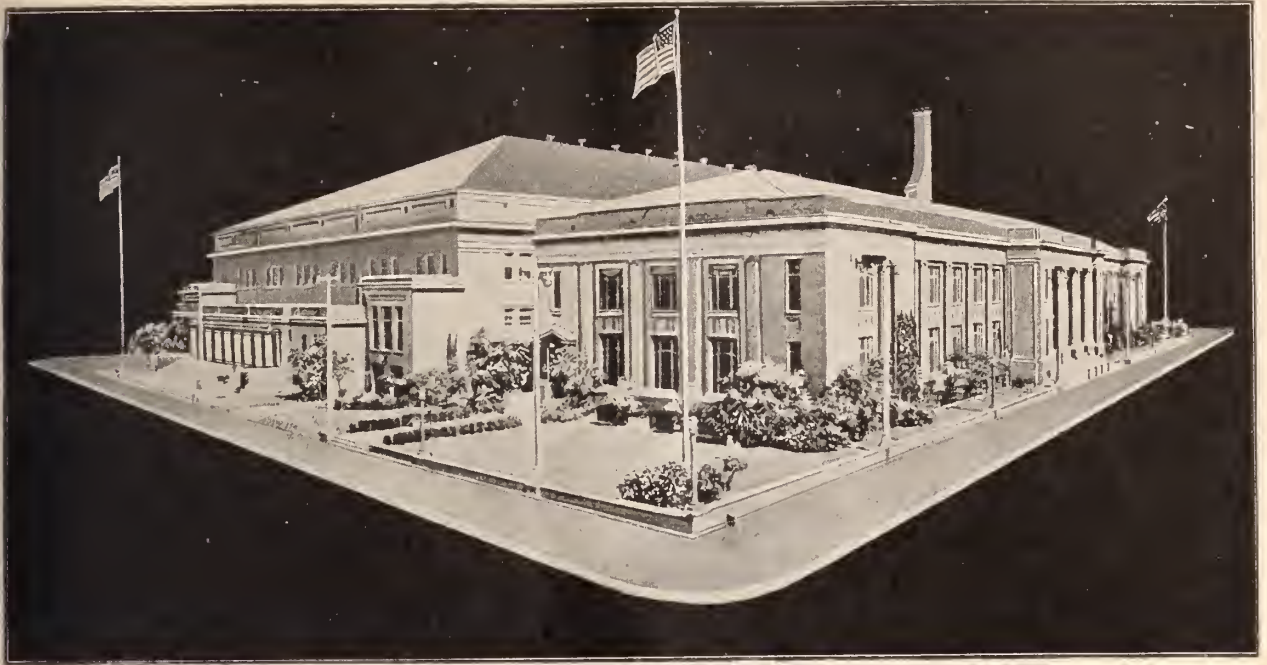
10. *Renal Tuberculosis: Clinical and Experimental* (Illustrated)—E. M. Medlar, Associate Professor of Pathology, University of Wisconsin.

Discussion opened by W. E. Bannen, M.D., La Crosse. (5 minutes.)

11. *Significance of Late Results of Surgical Treatment*—W. E. Fairfield, M.D., Green Bay.

Discussion opened by F. G. Connell, M.D., Oshkosh. (5 minutes.)

12. *Compensation for Loss of Vision Due to*



Industrial Diseases or Injuries—N. M. Black, M.D., Milwaukee.

Discussion opened by Harry S. Gradle, M.D., Chicago. (5 minutes.)

F. M. Wilcox, Chairman, Industrial Commission of Wisconsin. (5 minutes.)

13. *Hereditary and Environment Influences in Psychoneuroses*—M. Q. Howard, M.D., Wauwatosa.

Discussion opened by R. E. Mitchell, M.D., Eau Claire. (5 minutes.)

Thursday, September 17th
8:30 A. M.

14. 8:30—*Physiologic Aspects of Anemias*—C. D. Leake, M.D., Associate Professor of Physiology, University of Wisconsin.

15. 8:50—*Clinical Aspects of Anemias*—G. O. Broun, M.D., St. Louis, Mo. (Illustrated).

16. 9:10—*Anemias Reduce Powers of Resistance, Defense and Repair. Their Treatment is Urgently Needed, for Example in—*

(a) *Diseases of Internal Medicine*—W. J. Egan, M.D., Milwaukee.

9:20—(b) *Puerperal Infections*—R. E. Morter, M.D., Milwaukee.

9:40—(c) *In Preparation for Operation*—Forrester Raine, M.D., Milwaukee.

17. 10:00—*Preservation of Blood for Transfusion*—Miss M. C. Perry, Milwaukee.

10:20—Discussion of Papers 14, 15, 16—a, b,

FROM FRANK BILLINGS

"This program marks a great advance in the attempt of the medical society to give its members a correct idea of modern medicine. Your program is based on the principles of biology and the rational application of known facts established by laboratory investigation to clinical medicine.

"Your general argument is splendid; the arguments which precede the program of each half day session are fine and the selected papers with the abstracts are excellently presented. The various papers or subjects are well selected to illustrate the lessons which the physician and surgeon must learn and adopt in the practice of medicine if they are to fulfill their obligations to Medicine and to the general public."

c, and 17 opened by Joseph L. Miller, M.D., Chicago. (10 minutes.)

18. 10:30—*Present Status of Sympathectomy*—W. J. Meek, M.D., Professor of Physiology, University of Wisconsin.

Discussion opened by A. J. Carlson, M.D., University of Chicago. (5 minutes.)

19. 11:00—*Clinic on Anemias*—G. O. Broun, M.D., St. Louis, Mo.

2 P. M.

20. *Importance of Exact Diagnosis in Chronic Heart Disease*—J. A. E. Eyster, M.D., Professor of Medicine, University of Wisconsin.

21. *Determination of Transverse Cardiac Diameter* (Illustrated)—F. J. Hodges, M.D., Madison.

"EVERY MEMBER"

"If the members of the State Medical Society will meet the appeal of the program committee as stated on their preliminary program, to come prepared for presenting their own points of view regarding the important papers to be presented and to defend those points of view in open discussion, this meeting cannot fail to be an outstanding success.

"The program committee has succeeded in collecting a group of authoritative discussants of subjects of fundamental significance. Every member of the State Society, and as many outside the state as can go to Milwaukee should be present at this meeting. I wish I might be with them.

"George W. Crile."

22. *Value of Electrocardiography in Estimating Myocardial Reserve Power* (Illustrated)—M. F. Rogers, M.D., Milwaukee.

23. *Heart in Athletics*—L. M. Warfield, M.D., Milwaukee.

Discussion of Papers 20, 21, 22 and 23 opened by A. J. Patek, M.D., Milwaukee, with special reference to lues as a cause of heart lesions. (10 minutes.)

24. *Excessive Vomiting of Pregnancy and Eclampsia*—William Thalheimer, M.D., Milwaukee.

25. *Observations on Thyroid During Pregnancy*—Solomon Strouse, M.D., Chicago.

26. *Prevention and Relief of Prolapsus Uteri* (Illustrated)—R. S. Cron, M.D., Milwaukee.

Discussion of Papers 24, 25 and 26 opened by W. E. Ground, M.D., Superior. (10 minutes.)

27. *Pleuropulmonary and Bronchial Syphilis* (Illustrated)—E. L. Miloslavich, M.D., Professor of Pathology, Marquette University.

Discussion opened by W. S. Middleton, M.D., Assistant Professor of Clinical Medicine, University of Wisconsin. (5 minutes.)

Friday, September 18th**8:30 A. M.**

28. 8:30—*Physical Basis of the Physiologic Action of X-Rays*—H. N. Beets, M.D., Chicago.

29. 8:50—*Anatomic Evidence of Responses to Radiation* (Illustrated)—C. R. Bardeen, M.D., Professor of Anatomy and Dean of the Medical School, University of Wisconsin.

30. 9:10—*X-Ray Therapy of Malign Neoplasms* (Illustrated)—U. V. Portmann, M.D., Cleveland, Ohio.

31. 9:30—*Radium in Treatment of Malign Lesions of Mouth, Face and Neck*—T. E. Jones, M.D., Cleveland, Ohio.

32. 9:50—*Carcinoma Cervicis Uteri Treated With Electric Coagulation and Radium*—K. H. Doege, M.D., Marshfield.

Discussion of Papers 28, 29, 30, 31 and 32 opened by H. E. Potter, M.D., President; American Roentgen Ray Association, Chicago. (10 minutes.)

33. 10:30—*Cinematograph, Gastric Motility.*

1:30 P. M.

34. *Gastroenterostomy for Gastric Ulcer from Roentgenologic Viewpoint* (Illustrated)—H. E. Curl, M.D., Sheboygan.

Discussion opened by R. P. Potter, M.D., Marshfield. (5 minutes.)

35. *Cholecystography* (Illustrated)—F. W. Mackoy, M.D., Milwaukee. Discussion opened by M. J. Sandborn, M.D., Appleton. (5 minutes.)

36. *Myelographia* (Illustrated)—H. H. Reese, M.D., Madison.

Discussion opened by B. B. Rowley, M.D., Milwaukee.

37. *Ventriculography* (Illustrated)—A. S. Crawford, M.D., Department of Surgery, University of Wisconsin.

Discussion opened by H. W. Powers, M.D., Milwaukee. (5 minutes.)

38. *Cinematograph, Pulmonary Tuberculosis.*

PROGRAM MEETS WITH FAVOR

That the scientific program has met with favor on the part of members of the Society is indicated by letters received following publication of the preliminary program in the August issue of the Journal.

"In looking over the preliminary program published in the August number of the Journal," says Dr. Joseph F. Smith, Wausau, "it strikes me as being a very well balanced program and one which ought to appeal to all members of the medical profession."

"I have been interested in seeing the new departure in the program for our annual state meeting," writes Dr. J. Gurney Taylor, President of the State Board of Medical Examiners. "It looks extremely interesting and I believe the printing of abstracts of all subjects will be a material advance in presentation and will give much added interest to both the papers and discussions."

"DOWN TO BED ROCK"

"It is apparent," writes Dr. R. L. McCornack, Secretary of the Trempealeau-Jackson-Buffalo County Society, "that the Program Committee has



gotten down to bed rock in the preparation for the 1925 State Meeting at Milwaukee. Great importance is placed on chemistry and biology which are fundamental to medical knowledge. There is universal interest in bone healing, the anemias, light therapy, radiotherapy, X-ray and other practical subjects which are to be discussed. Best of all is the opportunity to review abstracts before the papers are read."

"The prospects look fine for an A number one meeting at Milwaukee," says Dr. F. P. Foley, Secretary of the Clark County Society. "The program you published deserves a hundred per cent attendance."

"I wish to congratulate the program committee for the excellent preparation, form of presentation, and subjects selected for our annual meeting program," writes Dr. M. D. Bird, Secretary of the Marinette-Florence County Society. "The thirty-nine papers and films should instruct us all and give us much to take away.

"Physicians assume responsibilities when they accept privileges of the profession' is only too true. Every one of us should endeavor to put into our profession more than we take out and not be content to simulate a sponge and be satisfied with absorbing all and returning none.

"It is evident that we shall have an interesting and instructive meeting. I hope that we shall have the large attendance this program deserves for only in that way may our profession and Society function properly, thereby serving better and grow in strength and usefulness.

"THE PROGRESS OF MEDICINE"

"I was very much interested in the program outlined for the next meeting of the State Medical Society of Wisconsin.

"The progress of medicine depends on the interpretation and clinical application of the pure sciences. The great advances in medicine in the past came through the microscope. The microscopic limit has been passed, and today ultramicroscopic methods permit investigations in the colloid and molecular fields, the results of which promise to transform medicine, even as it was transformed by the epochal work of Pasteur fifty years ago.

"William J. Mayo."

"It is also my wish that at this meeting arrangements be made for a permanent home and headquarters to be owned by the Society, located at either Milwaukee or Madison, and to be a plant not unlike that of the A. M. A. in Chicago except on the smaller scale."

"I AM ENTHUSIASTIC"

"The more I review the program that has been compiled," writes Dr. Edward Evans of La Crosse, "the more I am enthused about it. I am sure from the character of the men presenting the papers that we will have a real treat and that none of us need fear that it will be at all high brow in the sense that it will not have a practical application to our daily work. It brings us back to after all what is the basis of scientific medicine."

The final program to be distributed at the meeting will contain the synopsis of each paper to be presented, a summarized statement of the entire program, and other helpful material.

Delegates and Alternates Who Will Compose House of Delegates for Seventy-ninth Annual Meeting at Milwaukee

SOCIETY	DELEGATES	ALTERNATES
Ashland-B.I.	J. M. Dodd, Ashland.	M. S. Hosmer, Ashland.
Barron-P-W-S-B.	D. L. Dawson, Rice Lake.	H. M. Coleman, Barron.
Brown-Kewaunee.	Eugene Knox, Green Bay.	S. F. Rudolf, Green Bay.
Calumet.	J. W. Goggins, Chilton.	I. N. McComb, Brillion.
Chippewa.	E. P. Ellenson, Chippewa Falls.	L. A. Larsen, Colfax.
Clark.	H. H. Christofferson, Colby.	F. D. Jackey, Thorp.
Columbia.	A. F. Schmeling, Columbus.	H. E. Gillette, Pardeeville.
Crawford.	A. J. McDowell, Soldiers Grove.	C. A. Armstrong, Prairie du Chien.
Dane.	H. P. Greeley, Madison.	E. V. Brumbaugh, Madison.
	W. H. Sheldon, Madison.	Ira Sisk, Madison.
Dodge.	A. E. Bachhuber, Mayville.	E. S. Elliott, Fox Lake.
Door.		
Douglas.	T. H. Shastid, Superior.	John Baird, Superior.
Eau Claire & Associated Counties.	J. C. Baird, Eau Claire.	H. M. Stang, Eau Claire.
	F. E. Butler, Menomonie.	
Fond du Lac.	D. N. Walters, Fond du Lac.	A. C. Dana, Fond du Lac.
Grant.	M. A. Bailey, Fennimore.	J. C. Doolittle, Laneaster.
Green.	W. G. Bear, Monroe.	J. F. Mauermann, Monroe.
Green Lake-W-A.	W. E. Buckley, Redgranite.	Orvil O'Neil, Ripon.
Iowa.		
Jefferson.	H. O. Caswell, Ft. Atkinson.	W. S. Waite, Watertown.
Juneau.	C. C. Vogel, Elroy.	
Kenosha.	O. W. McClusky, Kenosha.	G. W. McCarthy, Kenosha.
La Crosse.	W. E. Bannen, La Crosse.	E. Smedal, La Crosse.
Lafayette.		
Langlade.	J. C. Wright, Antigo.	G. E. Moore, Antigo.
Lincoln.	W. H. Bayer, Merrill.	G. Baker, Tomahawk.
Manitowoc.	J. M. Kelley, Cato.	E. G. Festerling, Reedsville.
Marathon.	L. E. Speneer, Wausau.	A. B. Rosenberry, Wausau.
Marinette-Florence.	A. T. Nadeau, Marinette.	J. W. Boren, Marinette.
Milwaukee.	J. W. Hansen, 521 Grand Ave.	P. Curren, 2118 North Ave.
	M. L. Henderson, Wells Bldg.	C. Echols, Majestic Bldg.
	S. Higgins, Wells Bldg.	G. J. Kaumheimer, 987 2nd St.
	F. McMahon, 120 Wisconsin St.	G. W. Neilson, 774 3rd St.
	C. Morter, 230 Grand Ave.	F. Peterson, Wauwatosa.
	F. Pfister, Majestic Bldg.	H. W. Powers, 770 39th St.
	J. Powers, Majestic Bldg.	R. Sproule, 141 Wisconsin St.
	J. J. Seelman, Iron Blk.	R. G. Washburn, Goldsmith Bldg.
	F. Thompson, 425 E. Water St.	W. V. Nelson, 149 Lincoln Ave.
Monroe.		
Oconto.		
Oneida-F-V.	I. E. Schiek, Rhinelander.	
Outagamie.	E. F. McGrath, Appleton.	M. J. Sandborn, Appleton.
Pierce.	G. M. Dill, Prescott.	R. Cairns, River Falls.
Portage.	E. P. Crosby, Stevens Point.	D. S. Riee, Stevens Point.
Price-Taylor.	E. A. Riley, Park Falls.	J. T. Speek, Park Falls.
Racine.	G. W. Nott, Racine.	C. O. Schaefer, Racine.
Richland.	G. Parke, Viola.	W. R. Coumbe, Richland Center.
Rock.	W. A. Munn, Janesville.	P. W. Fox, Beloit.
	T. W. Nuzum, Janesville.	W. J. Allen, Beloit.
Rusk.	H. C. Johnson, Bruce.	J. C. Baker, Hawkins.
Sank.	H. J. Irwin, Baraboo.	E. McGrath, Baraboo.
Shawano.	A. J. Gates, Tigerton.	C. E. Stubenvoll, Shawano.
Sheboygan.	O. A. Fiedler, Sheboygan.	A. Knauf, Sheboygan.
St. Croix.	O. H. Epley, New Richmond.	F. S. Wade, New Richmond.
Trempealeau-J-B.	C. F. Peterson, Independence.	H. A. Jegi, Galesville.
Vernon.	W. M. Trowbridge, Viroqua.	H. J. Suttle, Viroqua.
Walworth.	E. J. Fucik, Williams Bay.	M. V. DeWire, Sharon.
Washington-Ozaukee.	H. M. Lynch, Allenton.	H. Albers, Allenton.
Waukesha.	A. W. Rogers, Oconomowoc.	U. J. Tibbitts, Waukesha.
Waupaea.	T. E. Loope, Iola.	F. E. Chandler, Waupaea.
Winnebago.	J. M. Hogan, Oshkosh.	J. W. Lockhart, Oshkosh.
Wood.	K. W. Doege, Marshfield.	W. G. Merrill, Wisconsin Rapids.

Large Commercial and Scientific Exhibits Fill Two Halls; Radiological Section of Society to Exhibit

With Walker Hall at the Auditorium filled with scientific exhibits by the Universities of Marquette and Wisconsin, Radiological Section of the State Medical Society, an exhibit on light by Dr. Steenbock, and other exhibits from the Wisconsin Anti-Tuberculosis Association and the American Medical Association, the 79th Annual Meeting will have the most complete scientific exhibit of any of the annual meetings. All of Walker Hall will be devoted to this section of the exhibits.

In Kilbourn Hall, where the registration booth will be located, twenty-seven commercial exhibitors will show that which is best in aids to the physician. The exhibit is well planned to show material of interest to all.

1—Merrell-Soule Company

The Merrell-Soule Company will exhibit its group of infant feeding products which are as follows:

- KLIM Powdered Whole Milk.
- Merrell-Soule Powdered Protein Milk.
- Merrell-Soule Powdered Lactic Acid Whole Milk.
- Akrelac Powdered Buttermilk.
- Vi-Mal-Dex Orange.
- Vi-Mal-Dex Lemon.

KLIM will be reliquified and served both as a demonstration of its palatability and as a refreshment for those who enjoy drinking milk and will also give as souvenirs the now well known KLIM Wafer which presents a means of eating milk in a form of a most palatable confection.

2 and 3—Pengelly X-Ray Company

The Pengelly X-Ray Company have reserved two full spaces for their exhibit at the State Medical Meeting.

One of these spaces will be entirely given over to the exhibit of X-Ray Apparatus which will consist of a new X-Ray Generator and complete outfit for Radiography of any capacity, and which will sell for about \$1,500.00, complete.

The second booth will be given over entirely to Physiotherapy equipment and will include the High Tension Standard Junior, the Acme International Diathermy, the Burdick Water and Air Cooled Mercury Quartz Ultra-Violet equipment and Deep Therapy Lamps.

4—W. B. Saunders Company

This publishing house, of Philadelphia and London, will show a complete line of their books. Among the new books and new editions will be:

- Bickham's Operative Surgery.
- Abt's Pediatrics.
- Pratt and Bushnell's Physical Diagnosis.
- McClendon and Medes Physical Chemistry.
- Morse's Applied Biochemistry.
- Medical Clinics of North America.
- Surgical Clinics of North America.

American Illustrated Medical Dictionary (new edition).

Boyd's Surgical Pathology.

Lilienthal's Thoracic Surgery.

Moynihan's Abdominal Operations (new edition).

Palfrey's The Art of Medical Treatment.

Anders and Boston's Medical Diagnosis (new edition).

Boyd's Preventive Medicine (new edition).

Jordan's General Bacteriology.

Also many other new books and new editions.

5—Radium Chemical Company of Pittsburgh and Victor X-Ray Corporation

Radium Chemical Company, Pittsburgh, Pa., will have on display the usual line of radium tubes, screens, etc., including a *new type needle*.

Radon (Radium Emanation) implants, needles and tubes will also be on display and the members of the Association are cordially invited to discuss with our representatives the inter-relation of radon and radium, and to learn about our remarkable radon service and delivery.

6—Huston Brothers Company

Huston Brothers Company of Chicago, who for many years past have been noted for producing new and unique instruments and devices, will be on hand as usual with a comprehensive exhibit. Many new items that they have recently put on the market will doubtless prove to be of great interest and service to the medical profession. This firm, in addition to handling a full line of staples, electrical apparatus, etc., etc., manufactures several well-known specialties which need no introduction to the physician.

7—Medical Protective Company of Fort Wayne, Indiana

In space No. 7, The Medical Protective Company of Fort Wayne, Indiana, will have its Branch Office manager, Mr. C. S. Brayton from Milwaukee, to consult with the policy holders of the Company on any questions propounded; and who will be glad to advise with any practitioner interested in the subject of malpractice insurance, whether a contract holder of The Medical Protective Company or not. All subjects, either legal, sales or service, will be discussed with those practitioners who are interested.

8—DeShell Laboratories, Inc.

The Deshell Laboratories exhibit will be an exhibit of Petrolagar, the pioneer oil and agar preparation, which has initiated a distinctly new phase in the treatment of constipation.

In addition to Petrolagar the Deshell Laboratories propose to show their new product, Deshell Starchless Agar Flakes, an American made agar which is much superior to the Japanese product as it is starchless, capable of giving over 25 per cent more bulk and is manufactured in a clean, sanitary and modern plant, which results in a sterile, pure agar. It is more palatable than the Japanese agar, and much more effective from a therapeutic standpoint.

Arrangements are being made whereby visitors to the

booth will receive, free of charge, a copy of the treatise on constipation "Habit Time."

9—Roemer Drug Company

The Roemer Drug Company of Milwaukee will display representative items of their attractive line. The exhibit this year, however, will include and feature the Radium Water Emanator, now advertised in the Wisconsin Medical Journal.

10—Wilson Laboratories

The feature of the Wilson Laboratories' exhibit Booth 10 will be Spleenmarrow, the organotherapeutic preparation recently developed in cooperation with the Pharmacological Department of the University of Wisconsin. Dr. David Klein, Technical Director and his assistants will point out the applications of Spleenmarrow in cases of Secondary Anemia. There will also be a display of exceptionally finely mounted specimens of various glands. These should prove interesting to the physician who desires to know something of the source and the manufacture of glandular preparations.

11—Registration Booth

12 and 13—E. H. Karrer Company

E. H. Karrer Company will exhibit some of the products of the W. D. Allison Company, Physician's Furniture; Wilmot Castle Company, Physician's Sterilizers; A. C. Clark & Company, Fountain Cuspidors; and McIntosh Electrical Corporation, Physio-Therapy Apparatus.

14—Cameron's Surgical Specialty Company and Spencer Lens Company

The exhibit of Cameron's Surgical Specialty Company, Chicago, at Space No. 14 will be of interest to every progressive medical practitioner. There complete demonstrations of the value as applied to all phases of minor and major diagnostic, operative and therapeutic procedure will be given daily throughout the meeting by a trained diagnostic clinician.

The Spencer Lens Company will exhibit such of their scientific and precision optical instruments as will be of interest to the medical profession in general, including research workers, physicians, hospitals and laboratories. There will be research high power binocular microscopes, microscopes for routine laboratory work, binocular dissecting microscopes, together with such accessories as lamps, mechanical stages, Dark Field Illuminators, etc. They will also show their line of Microtomes, both for paraffin, celloidin and frozen sections, together with such instruments as the Spencer Duboseq colorimeter for blood and urine analysis. Their new Haemacytometer should prove especially interesting also. It will be an opportunity to view the full line which of course, can only be done otherwise by calling at their offices.

15—O. Carliczek and Company

O. Carliczek & Co., Chicago, will exhibit a complete line of Urological Instruments.

16—Horlick's Malted Milk Company

Horlick's Malted Milk Co., Racine, Wisconsin, invites your attention to their exhibit where the well-known "Horlick" products will be interestingly presented. The representative in attendance will be pleased to discuss the uses and advantages of "Horlick's," the Original

Malted Milk for the feeding of infants, growing children, nursing mothers, and for invalids and convalescents.

17—Victor X-Ray Corporation

The Victor X-Ray Corporation of Chicago will have a complete exhibit in Booth 17.

18—Abbott Laboratories

The exhibit of The Abbott Laboratories will feature their newer fine pharmaceutical products—Butyn, Butesin Picrate Ointment, Metaphen and Neonol.

Butyn is well known as the local anesthetic which is rapidly replacing cocaine for surface anesthesia in eye, nose and throat work. It has many advantages over the older drug.

Butesin Picrate Ointment has become very popular for the relief of pain in the treatment of burns, wounds and braded surfaces.

Metaphen is the latest mercurial germicide which is growing in popularity because of the prompt and effective results it has given in the hands of many physicians.

Neonal is the latest drug discovered for producing restful sleep when pain is present, and is replacing the bromides as a sedative and hypnotic in insomnias, psychosis, and in cases of epilepsy.

Do not fail to visit the Abbott exhibit and investigate these newer drugs.

19—Mellin's Food Company

The source, nature and amount of nutritive elements in Mellin's Food will be shown in considerable detail by representatives of the Mellin's Food Company in Booth No. 19. They will be prepared to answer as clearly as possible all questions that have a bearing upon the use of Mellin's Food in both infant and adult feeding.

20—The C. V. Mosby Company and Sharp and Smith, Chicago

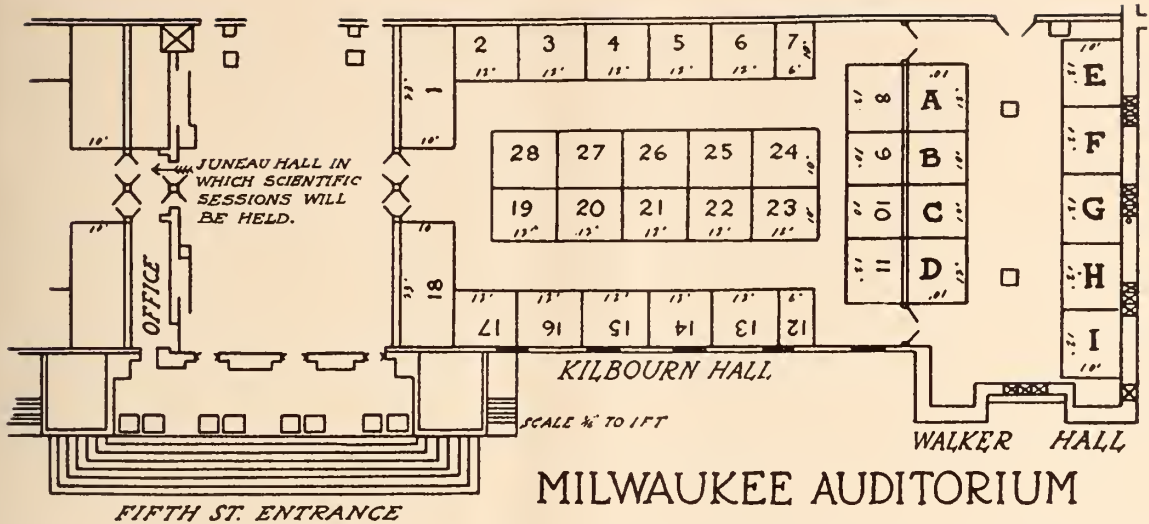
The C. V. Mosby Company, Medical Publishers, St. Louis, Mo., will exhibit their line of medical publications. Among the newer books will be Duke "Allergy," Frank and Loeb "Ocular Therapeutics," the new editions of Horsley "Operative Surgery" and Crossen "Operative Gynecology." The new American Heart Journal will also be displayed.

21—Engeln Electric Company and Standard X-Ray Company

The Standard X-Ray Company invites the Medical Profession's attention to an innovation in the construction of X-Ray Machinery, and will have on exhibit a powerful Duplex Disc X-Ray Generator suitable for all classes of high grade X-Ray technical work, with a "Patented Safety Feature" embodied in the construction of the Transformer for use while doing fluoroscopy and for treatment work.

This outfit is particularly designed as an "Auxiliary Unit" for large installations, or for the general practitioner who desires an X-Ray Machine with sufficient output to warrant its use for the giving of X-Ray treatments within its line of output—125 Peak Kilovolts.

The same high grade standard of construction and efficiency are maintained in this new line of Transformers to a degree heretofore thought impossible for accomplishment.

**22—Hygeia**

Booth 25 will be devoted to an exhibit showing the value of "Hygeia." The new auto emblem of the American Medical Association will be available at this booth.

23—Kremers-Urban Company

The Kremers-Urban Company of Milwaukee will be represented as usual at this meeting. Their exhibit will be representative of the service they offer.

24—H. G. Fischer and Company

The H. G. Fischer & Company, of Milwaukee and Chicago will show a full line of Electro-Physio-Therapy apparatus which will include their latest 30 Milliampere X-Ray Unit, Improved Diathermy Equipment, Morse Wave Generator, Hanovia Quartz Lamps and a full line of the latest and most practical electrodes for all purposes. All physicians attending the meeting are urged to visit their booth, No. 24, and have a demonstration of their equipment and leave their names for instructive reprints and literature.

25—Brook Hill Certified Milk

Brook Hill Certified Milk is a raw milk designed for infant, invalid and convalescent use. Its cleanliness and purity are certified by the Medical Milk Commission of the Milwaukee Academy of Medicine. Brook Hill Certified Milk is an ideal milk, produced under stringent sanitary regulations and worthy of the doctor's recommendation at all times.

Brook Hill Certified Milk is available through the local milk dealer in Milwaukee, Waukesha, Oconomowoc, Madison, Racine, Kenosha, Neenah, Menasha,

Appleton and Oshkosh. Shipping arrangements will be made by the farm to other cities in Wisconsin when requested.

26—W. C. Kreul Company

A complete line of furnishings for the physician's office will be shown by the W. C. Kreul Company, of Milwaukee. The exhibit will also include a showing of the well known Witmer Records originated for the special use of physicians.

27—Hanovia Chemical and Manufacturing Company

The Hanovia Chemical Company in booth 27 will exhibit their Standard Pioneer Quartz Lamps, the Alpine Sun Lamp, the Luxor Lamp and the Kromayer Lamp. In addition to these, they will feature two new special apparatus. A self-contained Kromayer Unit of an unusual construction which meets the clinical need by adapting itself to those surroundings of a small office. The other featured lamp is the Sollux for radiant heat therapy. It is of the usual design and construction which meets all the necessary usages for which this therapy is indicated.

All the members attending are cordially invited to visit the booth to see a demonstration by the members of their staff. Literature on this subject will be available.

28—Frank S. Betz Company

Featuring the standardization of equipment, the exhibit of Frank S. Betz Company will include their standard lines of furniture, instruments and supplies.

WANTED REPORTS STATE BOARD OF HEALTH

The library of the W. A. T. A. is very anxious to complete its collection of the Reports of the Wisconsin State Board of Health, and appeals for contribution from any physician who may have early numbers. Our present file does not go back beyond 1903, and efforts, so far made, have not brought to light any available copies of earlier numbers.

It may so happen that some reader possessing copies of the earlier reports may not be willing to give them to us outright; but would be willing to deposit them with us on an indefinite loan basis. This would be very

acceptable and we would exercise every reasonable care to safeguard the volumes thus made available.

This effort is but a part of a larger ambition to gather together in the Health Service Building a permanent library on Social Medicine and Public Health. Back of that, in turn, is the desire to have such material as may thus be gathered together, made available to Wisconsin students of Medicine, Nursing, and Social Work. Your correspondence and assistance is earnestly solicited.

Wisconsin Anti-Tuberculosis Association.
Hoyt E. Dearholt, M. D., Executive Secretary.
Aimee Weinstock, Librarian.

Results of June-July State Board Examinations Announced; Board Honors Former Member

Eighty-six prospective Wisconsin physicians passed their examinations in the Basic Sciences and those of the State Board of Medical Examiners during the examination of June 30th-July 3rd, while twenty were admitted by reciprocity according to Dr. Robert E. Flynn, Secretary of the State Board of Medical Examiners. In addition one osteopath was admitted by reciprocity while four passed their examinations and a sixth was licensed in surgery. Dr. J. Gurney Taylor, Milwaukee, was re-elected as president of the Board and Dr. Robert E. Flynn, La Crosse, was re-elected secretary.

Of the 112 who took the examinations, fourteen were conditioned and six failed. Ten of the fourteen conditioned were applicants as M. D.'s while four were osteopaths. Of the ten physicians conditioned, six were foreigners (one of whom had failed previously); two were physicians of several years' experience, and two were students. The six failures included one osteopath who was called home by the death of his wife and did not complete the examination, two foreign physicians, and four osteopaths.

The general average of the examinations was 85.04. The highest grade obtained in the January, 1925, examination was 91.68 while in the June-July examination Dr. Charles Lane Newberry of Marquette took high honors with an average of 93.03. The grades follow:

Chas. Lane Newberry, Marquette.....	93.03
Robt. Irving Hiller, U. of Pa.....	91.15
Bengt Norman Bengtson, U. of Ill.....	90.96
Norman Leshin, Rush.....	90.95
Morris F. Stein, N. W.....	90.40
Ting D. Lee, N. W.....	90.33
Walter Paul Zmyslony, Marquette.....	90.16
Earl Eugene Carpenter, Rush.....	90.10

The following resolution was adopted in regard to the passing of Dr. G. H. Ripley of Kenosha, Wisconsin:

Whereas, It has pleased Almighty God in His infinite mercy to remove from our Board one of its most esteemed members, Dr. George H. Ripley,

Whereas, Dr. Ripley has, during his fourteen years of service, by his untiring efforts and unscrupulous honesty, proven worthy of the trust and confidence reposed in him,

Whereas, He has endeared himself to his fellow members by his ever loyal spirit in the advancement of medical standards,

Therefore, We, the members of this Board, do extend our most heartfelt sympathy to his family and do hereby order a copy of these resolutions to be spread upon our minutes and a copy to be printed in the Kenosha newspapers.

Signatures:

J. Gurney Taylor, M.D., *President*.

Robt. E. Flynn, M.D., *Secretary*.

J. B. Brewer, M.D.

C. W. Rodecker, M.D.

Minnie M. Hopkins, M.D.

Edith Haigh-Stevens, M.D.

E. C. Murphy, D.O.

The Board is having printed a new compilation of their Rules and Regulations which is expected from the press shortly. The next reciprocity meeting of the Board will be held the early part of October. The Basic Science Board will hold a meeting during September.

The next examination by the State Board of Medical Examiners will be held at Hotel Lorraine, Madison, January 12, 13 and 14, 1926. This will also be preceded by a meeting of the Basic Science Examining Board, probably in December. All applications that are to be considered by either board must be in their hands at least two weeks before the respective meetings.

The questions follow:

PRINCIPLES AND PRACTICE OF MEDICINE

DR. J. GURNEY TAYLOR, Examiner

1. Give symptoms, differential diagnosis and treatment of smallpox.
2. Differentiate diphtheria from follicular tonsillitis, and give treatment in detail.
3. Give symptoms of mitral stenosis, and state how other organs are affected.
4. Name two forms of chronic Bright's Disease; giving differential diagnosis.
5. Give symptoms of aortic incompetency, physical findings and treatment.
6. Give symptoms, differential diagnosis and treatment of chronic pulmonary tuberculosis.
7. What are the causes and symptoms of dilatation of the stomach.

Pediatrics

DR. J. GURNEY TAYLOR, Examiner

1. State the causes of chorea. Give diagnosis and treatment.

2. Give duration, prognosis and complications of pertussis.
3. How would you diagnose pyelitis in a child? Give treatment.
4. Give symptomatology and treatment of pylorospasm.
5. State proper care and feeding of premature infants.

Anatomy

DR. ROBERT E. FLYNN, Examiner

Answer any eight questions.

1. (a) Name and illustrate the motor-fibre tract of the spinal cord. (b) Show typical relation of ventral root neurons with the sympathetic system.
2. Describe the cross section of a normal kidney. Illustrate by diagram.
3. What anatomical structures are encountered in a resection of a knee-joint?
4. (a) Name four ductless glands in the body. (b) Illustrate by diagram the relationship of the cystic, common and pancreatic ducts and show where they empty.
5. What muscles enter into the formation of the shoulder-joint?
6. What is the nerve and blood supply of the rectum? Where do lymphatics drain?
7. Name five tendons that extend the foot.
8. (a) What does a transverse section of bone show microscopically? (b) Name three distinct classes of articulation.
9. What viscera have no peritoneal investment?
10. Given an exophthalmic goitre to remove, what important anatomical structures might be observed?

Eye, Ear, Nose and Throat

DR. ROBERT E. FLYNN, Examiner

1. Give differential points in acute conjunctivitis, acute iritis and acute glaucoma.
2. Give simple diagnosis and complications of an acute purulent inflammation of Antrum of Highmore.
3. Differentiate clinically and microscopically between Vincent's Angina and diphtheria.
4. Give etiology and complications of an acute suppurative otitis media.

Physical Diagnosis

DR. E. C. MURPHY, Examiner

1. What are the physical signs of stenosis of the mitral valve?
2. Give the physical signs in the first and second stages of acute lobar pneumonia.
3. What are the physical signs of acute general peritonitis?

Neurology

DR. E. C. MURPHY, Examiner

1. Give the etiology of multiple neuritis.
2. Give the symptoms of a case of apoplexy, due to cerebral hemorrhage.
3. Differentiate epilepsy from hysteria.

Hygiene

DR. E. C. MURPHY, Examiner

1. What precautions should a physician observe to avoid carrying contagious diseases?

2. What diseases are propagated by drinking water? How can their spread be prevented?

Materia Medica

DR. MINNIE M. HOPKINS, Examiner

Write on 7 questions.

1. Discuss Insulin and compare with other remedial Diabetic treatment.
2. Indicate use of following drugs: Luminol, Urotropin, Cactus, Potassium, Permanganate, Iodine, Strychnia, Atropine, Lysol, Chlorine Gas, Bryonia, Gelseminum.
3. Outline Medicinal treatment following diseases according to your school of practice: Typhoid Fever, Pneumonia, Otitis Media, Entero Colлитis, Tonsillitis.
4. Discuss the Anti-Toxins.
5. Discuss Radium with special referenee to its therapeutic value.
6. Discuss habit forming drugs and methods of prevention and cure.
7. Discuss preventive and curative medical treatment of Goitre.
8. Discuss Haemostatic Drugs.

Toxicology

DR. MINNIE M. HOPKINS, Examiner

Write on 3 questions.

1. (1) Discuss Ptomaine Poisoning. Symptoms, treatment. (2) If fatal what would post-mortem show.
2. (1) Discuss death from acute alcoholism. (2) If picked up in state of coma with what might it be confused? (3) How differentiate? (4) How detect in tissues after death?
3. Discuss Opium poisoning.
4. (1) Name. (2) Classify. (3) Give poisonous dose, and antidote of five poisons.

Chemistry

DR. C. W. RODECKER, Examiner

1. What is Arsenic? Its origin?
2. What is Iodine? Its origin?
3. What is Potassium? Its origin?

Pathology

DR. C. W. RODECKER, Examiner

1. The pathogenesis of Ascites.
2. The pathogenesis of Cerebritis.
3. The pathogenesis of Splenitis.
4. What is disease?
5. The pathogenesis of Exophthalmic Goitre.
6. The pathogenesis of Delirium Tremens.
7. Where is the 3rd Eye located?
8. What is Ptomaine Poisoning?

Physiology

DR. J. B. BREWER, Examiner

1. Mention the ductless glands and give theory as to the function of any one of them.
2. State function of fifth cranial nerve.
3. (a) How is body heat produced? (b) How is the temperature of the body regulated?
4. What is the composition of urine; give the normal reaction and specific gravity of urine?
5. What would be the effect on digestion if the pancreatic duct was obstructed?

- 6. What is the relation of the capillaries to the circulation?
- 7. State the function of the retina.
- 8. What effect, if any, results from the division of:
(a) A vasoconstrictor nerve? (b) A vasodilator nerve?

Jurisprudence

DR. J. B. BREWER, Examiner

- 1. What is medical jurisprudence?
- 2. (a) Describe expert testimony. (b) Describe phenomena and signs of death.

Obstetrics

DR. EDITH H. STEVENS, Examiner

Write on 7 questions.

- 1. Discuss Foetal changes at birth: weight, respiration, pulse, temperature, digestion, circulation, liver, heart, cord, eye sight.
- 2. Discuss the premature infant and how to handle him.
- 3. Discuss injuries to mother and child.
- 4. Diagnosis and conduct of Breech Presentation.
- 5. What symptoms would lead you to advise Caesarean Section?
- 6. Indications for and conduct of premature Labor and Abortion.
- 7. Indications for Version. Varieties, methods, contra-indications.

Gynecology

DR. EDITH H. STEVENS, Examiner

Write on 4 questions.

- 1. Discuss the Menopause. Disease and disorders of this period.
- 2. Discuss gynecological conditions as related to insanity in women.
- 3. Discuss consequences of neglected repair of lacerated uterus and Pelvic floor.
- 4. Discuss cystic tumor of the ovaries.
- 5. Give causes and diagnosis of Pelvic cellulitis.

Principles and Practice of Osteopathy

DR. E. C. MURPHY, Examiner

(Osteopaths Only)

- 1. Give diagnosis, treatment and prognosis in a case of diabetes mellitus in a man 45 years of age.
- 2. Outline your treatment and advice to a young woman 20 years of age, whose case you have diagnosed incipient tuberculosis.
- 3. A young man 18 years old walks into your office complaining of pain in left hip, radiating to gluteal muscles, down back of thigh to knee. A diagnosis of sciatica has been made previously. What steps would you take to confirm that diagnosis or otherwise?
- 4. Differentiate gastric ulcer and gall stones.
- 5. A woman 40 years old complains of pain in breast. State procedure. What would you look for, and how confirm your diagnosis?
- 6. Outline treatment in case of acute rheumatic fever. Give prognosis.
- 7. Discuss headache.

One Hundred Six Licensed to Practice Medicine and Surgery by State Board of Medical Examiners

BY EXAMINATION

1. Andruskiewiez, Elizabeth	Marquette	714 8th Ave., Milwaukee.
2. Archer, Willard Eugene	Marquette	St. Elizabeth's Hosp., Appleton.
3. Armitage, Ralph Boyce	Univ. Ill.	Lawrenceville, Ill.
4. Bengtson, Bengt Norman	Univ. Ill.	886 Downer Ave., Milwaukee.
5. Berg, Walter Richard	Marquette	Bellin Hosp., Green Bay.
6. Berman, Edward	Marquette	434 12th St., Milwaukee.
7. Bernhart, Erwin Lester	Marquette	St. Mary's Hosp., Milwaukee.
8. Butler, Lawrence Harold	Marquette	602 N. 3rd St., Ishpeming, Mich.
9. Carpenter, Earl Eugene	Rush	1017 Cummings Ave., Superior.
10. Connell, Charles William	Marquette	Wis. General Hosp., Madison.
11. Cook, Carroll Kenneth	Univ. Mich.	Methodist Hosp., Madison.
12. Costello, William Hilliard	Queen's Univ.	Calumet, Minn.
13. Curtin, James Golden	Univ. Pa.	2102 Grand Ave., Milwaukee.
14. Deitchman, Morris Michael	Univ. Ill.	St. Joseph's Hosp., Marshfield.
15. Derse, Fabian Robert	Marquette	254 Lake Blvd., North Milwaukee.
16. Dvorak, Harold Joseph	Univ. Pa.	263 33rd St., Milwaukee.
17. Edwards, Wilmer Charles	Rush	Riehland Center, Wis.
18. Erps, Benjamin	Marquette	728 10th St., Milwaukee.
19. Flarity, Thomas Harold	Marquette	Milw. County Hosp., Wauwatosa.
20. Florin, Alvin Christian	Univ. Ill.	Lutheran Hosp., La Crosse.
21. Friedbacher, Karl	Univ. Pa.	834 69th Ave., West Allis, Wis.
22. Froede, Herbert Edwin	Marquette	883 Island Ave., Milwaukee.
23. Gilmer, Prather Jay	Howard Univ.	463 7th St., Milwaukee.
24. Gregory, Lawrence William	Univ. Calif.	St. Nazianz, Wis.
25. Guenther, Oscar Frederick	Marquette	3707 Parkhill Ave., Milwaukee.
26. Gute, Edwin Bertram	Rush	812 Newhall St., Milwaukee.
27. Gutheil, Byron William, D.O.	Chi. Col. of Osteo.	222 Randall St., Waukesha.

28.	Hahn, Paul Reinhold.....	Northwestern.....	1101 Grand Ave., Racine.
29.	Hammond, Reginald Wilmot.....	Univ. Pa.....	Manitowoc, Wis.
30.	Harkin, John Charles.....	Marquette.....	Milw. County Hosp., Wauwatosa.
31.	Harrigan, William LeRoy.....	Marquette.....	2621 Wells St., Milwaukee.
32.	Hiller, Robert Irving.....	Univ. Pa.....	647 20th St., Milwaukee.
33.	Hussey, Frank Larkin.....	Northwestern.....	584 Layton Blvd., Milwaukee.
34.	Jones, Louis Edwin.....	Univ. Minn.....	Preseott, Wis.
35.	Kelagher, James Dalton, D. O.....	Chi. Col. of Osteo.....	245 Juneau St., Fond du Lac.
36.	Kersehaumer, Luisa.....	Univ. Vienna.....	1114 State St., Milwaukee.
37.	Klumb, Milton Gustave.....	Marquette.....	Ev. Deaconess Hosp., Milwaukee.
38.	Kohn, Samuel Eleazar.....	Marquette.....	Mt. Sinai Hosp., Milwaukee.
39.	Kozina, Frank Joseph.....	Marquette.....	St. Mary's Hosp., Milwaukee.
40.	Krupocki, Peter.....	Marquette.....	474 24th Ave., Milwaukee.
41.	Kuhn, Michael John.....	Marquette.....	1018 37th St., Milwaukee.
42.	Landis, Ralph Verl.....	Rush.....	120 S. Oneida St., Appleton.
43.	Lee, Ting D.....	Northwestern.....	650 7th St., Milwaukee.
44.	Lennon, Clifford Joseph.....	Chi. Col. of Osteo.....	Portage, Wis.
45.	Leshin, Norman.....	Rush.....	586½ 7th St., Milwaukee.
46.	Liest, Leon John.....	Marquette.....	200 9th St., Milwaukee.
47.	Lynch, Charles Virgil.....	Marquette.....	200 9th St., Milwaukee.
48.	McCabe, John.....	Marquette.....	190 34th St., Milwaukee.
49.	McCormack, James Johnston, D. O.....	Littlejohn.....	York Bldg., Sheboygan, Wis.

No. 49, McCormack, wrote for license in just Surgery, already licensed to practice Osteopathy.

50.	Miller, Hubert Caspar.....	Marquette.....	878 2nd St., Milwaukee (Racine).
51.	Milson, Louis.....	Marquette.....	St. Mary's Hosp., Green Bay.
52.	Miner, Harold Barriek.....	Univ. Toronto.....	929 Maryland Ave., Milwaukee.
53.	Monsted, John Winfield.....	Marquette.....	Milw. County Hosp., Wauwatosa.
54.	Morris, Hurston H.....	Marquette.....	Milw. County Hosp., Wauwatosa.
55.	Mullen, Robert Ambrose.....	Marquette.....	St. Francis Hosp., La Crosse.
56.	Multhauf, Ad William.....	Marquette.....	St. Francis Hosp., La Crosse.
57.	Murphy, William John.....	Northwestern.....	Milw. Hosp., Milwaukee (Clintonville).
58.	Neubert, Richard.....	Univ. Freiburg.....	229 So. 5th St., Terre Haute, Ind.
59.	Newberry, Charles Lane.....	Marquette.....	200 9th St., Milwaukee.
60.	Norton, Donald Martin.....	Marquette.....	Milw. County Hosp., Wauwatosa.
61.	Nystrum, Lester Esadore.....	Marquette.....	St. Joseph's Hosp., Milwaukee (Medford).
62.	O'Donnell, Leonard Aloysius.....	Marquette.....	St. Elizabeth's Hosp., Appleton.
63.	O'Hara, Clarence Morton.....	Univ. Ill.....	Avoca, Wis.
64.	O'Leary, George Patriek, D. O.....	Amer. Sch. of Osteo., Kirksville.....	Portage, Wis.
65.	Ozonoff, Jacob Borah.....	Univ. Ill.....	3014 Chestnut St., Milwaukee.
66.	Paul, Olin.....	Univ. Ontario.....	108 S. Randall Ave., Madison (Niagara).
67.	Peterson, Lyndle Wilson.....	Rush.....	Green Bay.
68.	Peterson, Marvin Garfield.....	Univ. Minn.....	Lake Mills.
69.	Rice, Rhody William.....	Marquette.....	St. Mary's Hosp., Milwaukee.
70.	Rivard, Raymond Robert.....	Marquette.....	Milw. County Hosp., Wauwatosa.
71.	Rowan, James Pollock.....	Marquette.....	1815 Grand Ave., Milwaukee.
72.	Ruppenthal, Karl Paul.....	Marquette.....	639 4th St., Milwaukee.
73.	Scherl, Sam A.....	Marquette.....	300 E. Front St., Ashland.
74.	Schneider, Charles Samuel.....	Marquette.....	246 12th St., Milwaukee.
75.	Shain, Frederick Bliss, D. O.....	Chi. Col. of Osteo.....	1342 E. 53rd St., Chicago.
76.	Sheedy, Chester Leo.....	Marquette.....	1578 2nd St., Milwaukee.
77.	Sibilsky, Carl Edward.....	Marquette.....	Algoma, Wis. (Milwaukee).
78.	Sinaiko, Abraham Arlie.....	Northwestern.....	808 Chandler, Madison.
79.	Skaletar, Edward Albert.....	Marquette.....	St. Vincent's Hosp., Los Angeles.
80.	Slaney, John G.....	Marquette.....	2621 Wells St., Milwaukee.
81.	Slazinski, Leo William.....	Marquette.....	St. Joseph's Mercy Hosp., Detroit.
82.	Sprague, Lindley Vincent.....	Detroit Col. of Med. & Surg.....	Wis. Gen. Hosp., Madison.
83.	Stein, Morris Franklin.....	Northwestern.....	650 7th St., Milwaukee.
84.	Sultzman, Francis Eugene.....	Washington Univ.....	511 Broadway, Hannibal, Mo.
85.	Trauba, Norbert Carl.....	Univ. Pa.....	Wis. General Hosp., Madison.
86.	Turgeson, John Fletcher.....	Marquette.....	St. Mary's Hosp., Madison.
87.	Weisberg, Joseph Herman.....	Marquette.....	619 Reservoir Ave., Milwaukee.

88. Wink, Reuben Henry	Marquette	489 33rd St., Milwaukee.
89. Wolter, Serenus Henry	Marquette	3203 Chestnut St., Milwaukee.
90. Wuest, Leonard Joseph	Marquette	St. Mary's Hosp., Cincinnati.
91. Zmyslony, Walter Paul	Marquette	419 Beecher St., Milwaukee.

BY RECIPROCITY

1. Briggs, Harry Arthur	Texas	129 Wis. St., Neenah.
2. Collings, Joseph Sylvester	Iowa	Wabasha, Minn.
3. Field, Merton	Minnesota	Chippewa Falls.
4. Fowler, Fred Hill	Iowa	Deer Park.
5. Hall, Earle Hopkins	Illinois	Green Bay.
6. Hubbard, Orton S.	Illinois	Mendota.
7. Lane, John William	Illinois	Kenosha.
8. Linhardt, Oscar Vernon Norbert	Maryland	Shell Lake.
9. Lorch, Oscar William, D. O.	Missouri D. O.	Madison.
10. Nixon, Byron	Illinois	Kenosha.
11. Oldfield, Russell Aaron Alger	Michigan	Eagle River.
12. Perry, Titus Mimms	Tennessee	Milwaukee.
13. Radabaugh, Rudolph Charles	Minnesota	Prescott.
14. Schmidt, Ernst Albert	Colorado	Manitowoc.
15. Schneller, Edwin Jacob	Illinois	Racine.
16. Snead, Calvin Bee	Tennessee	Milwaukee.
17. Squier, Theodore Louis	Michigan	Milwaukee.
18. Tilleman, John Francis	Illinois	Appleton.
19. Tompkins, Thomas B.	Texas	Manitowoc.
20. Weston, Frank Laurance	Illinois	Madison.
21. Wheeler, Theodora	Minnesota	Lake Geneva.

EXCHANGE OF CERTIFICATE OF REGISTRATION FOR LICENSE

1. Caldwell, Thomas Joseph	219 Pederson Ave., Ladysmith.
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ITINERANT

1. Doran, George M.	718 La Salle Bldg., Minneapolis, Minn.
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Hospitals in Wisconsin; A Historical Survey, 1816-1925

BY CHARLES R. BARDEEN, M.D.,
Dean of the University of Wisconsin Medical School

(Continued from August.)

At a special session of the legislature in 1920 an act was passed authorizing the erection of the Wisconsin General Hospital at the University of Wisconsin as a memorial to those who served in the World War. The Bradley Memorial Hospital, a gift to the university already in service, was made part of the new hospital plant and pending the erection of the new building was utilized largely for hospital care of crippled and deformed children. Here specialists were able to give expert surgical care to a much greater number of these children than had hitherto been possible. During the year 1920-21, thirty crippled children and five infants with cleft palate and harelip, sent to Madison from Sparta, were operated on. The completion of the new hospital building, with special wards for these children, now make available much

greater facilities for this most valuable work. While crippled children who have gone for years maimed and deformed cannot, as a rule, be restored to perfect shape, many of them can be vastly benefited. When operative procedures can be resorted to early after the deformity appears, much more can, as a rule, be achieved than when they are undertaken later. We now, at last, have the means of making effective the humane statutes passed over twenty years ago to insure proper care for crippled children. No one who has seen the good that is being done can doubt the wisdom of providing means for making this act effective.

From what has been stated above it may be seen that the state school has been called upon in recent years to perform a triple function; (1) to care for dependent children, give them schooling and place

them in homes; (2) to provide custodial care and training for crippled children and infants, and (3) to provide specialized surgical care for crippled children and infants with congenital defects. This last service it has been able to do only by sending the children to hospitals in which a special orthopedic service was developed and only now with the completion of the Wisconsin General Hospital have facilities been furnished equal to the demand. This leaves the state school with the first two functions. To one who has studied the situation it is obvious that these two functions interfere with one another. Healthy dependent children cannot receive the best preparation for good homes in the same institution in which custodial care and specialized training is being given to crippled children and infants, many of them diseased, especially when buildings and other resources are limited. Either a branch of the state school or a new institution under the management of the Board of Control should be established at Madison for the custodial care of crippled children and of infants. These wards of the state, when in need of highly specialized hospital care, necessarily expensive, could be transferred to the Wisconsin General Hospital and then back again for convalescent and custodial care, and in the case of older children for schooling, to the institution suggested in which care, because less exacting, can be more economically given. Such an institution would have at least two buildings, one for the crippled children and one for the infants and could depend on the staff of the Wisconsin General Hospital for such medical care as would be needed. This would leave the state school at Sparta well prepared to perform its original functions. A beginning along these lines has already been made by the loaning by the Board of Regents of the university to the Board of Control of some cottages on the university grounds for custodial care of crippled children during convalescence. Thirty crippled children are now housed in the buildings, which are managed as a part of the state school. More permanent quarters, as suggested above, should be erected.

V. GENERAL HOSPITALS AND SANITARIUMS

The development of general hospitals in Wisconsin reflects closely the change in social and economic conditions since its admission to the Union as a state. In 1836 when Wisconsin was admitted

as a territory there were only about 11,000 white residents, in 1850, two years after its admission to the Union as a state, there were over 300,000, in 1875 about 1,250,000, in 1900 about 2,000,000, in 1925 nearly 3,000,000. From 1850 to 1875 only about 10 per cent of the population lived in cities of 2,500 or more, in 1900 about 38 per cent, in 1925 about 50 per cent. The period from 1850 to 1875 was devoted mainly to settlement of the southern half of the state and exploitation of the forests of the north. Highways and roads had to be developed. The chief products of the farm was wheat, the chief manufacturing was of flour and lumber. The cities were mainly immigration and trading centers.

There was much more illness than at present. Cholera epidemics swept over the state in the early days. Typhus fever entered some of the lake shore cities. Malaria prostrated many and took its yearly toll of life. Typhoid fever was common. Severe epidemics of smallpox were frequent and it is estimated that of those attacked one in five died. Thanks largely to the efforts of state and local boards of health these diseases have since either disappeared or have been greatly reduced. There was relatively much more pulmonary tuberculosis than at present, both diphtheria and scarlet fever killed and maimed far more children, infant morbidity and mortality were greater. It is to be remembered that the State Board of Health was not established until 1876 and was not given much financial support until after 1900.

During this early period care of the sick was a heavy household responsibility. Here and there a woman less burdened with such responsibilities than most then were, devoted herself to giving aid to her neighbors as a practical nurse or midwife. The United State census for 1850 classified occupations merely for men, in the 1860 census the occupation of 184 women is given as nurses, of 6 as midwives, a total of 190. In the 1880 census 187 nurses and 47 midwives are listed, a total of 234. The population in the latter year was 1,315,229. These figures give one practical nurse or midwife to each 5,623 of the population and while probably not accurate indicate how little outside help in those days was available in nursing the sick.

The physicians were all family practitioners who made rounds on horse back, with instruments and

medicines in saddle bag or later as the roads improved in a two wheel gig. There were few who were specialists or attempted major surgery. In the census of 1850 there are listed for Wisconsin 5 surgeons and 586 physicians. This gives one physician or surgeon to each 521 of the population. These physicians ranged all the way from men of high character well-trained according to the standards of the day to untrained quacks of various types. Many left medicine to enter commercial pursuits. By 1875 the relative number of physicians had become reduced to about one in 1,100 of the population but there were still but few specialists.

Milwaukee in the early days was the chief city for the reception of immigrants. This introduced special problems in the care of the sick. Those who had not yet had time to establish homes could obviously not be cared for there. This condition appears to be the chief factor leading to the establishment of the first general hospitals in the state. In 1845 Bishop Henni of Milwaukee requested the Superioress of the Sisters of Charity of the Order of St. Joseph's at Emmitsburg, Maryland, to send some Sisters to help him in charitable work. In 1846 six Sisters came out. The journey took them five weeks. These Sisters did much good among the poor. The need of a hospital for this work was evident and Bishop Henni succeeded in getting four more Sisters to come out to establish one. This was opened in 1848 as the St. John's Infirmary in a two story frame building. Funds for this purpose were contributed by friends. Next year the Sisters took over a larger house which, because of the difficulty in heating it, was called by the Sisters the "Crystal Palace." In 1852 six more Sisters came from Maryland to aid in the work. In 1848 the Milwaukee City Medical Association was requested by the Sisters to cooperate in the care of the sick and appointed twelve of the number to serve for one year. Physicians of the city subsequently continued to serve the charity patients in the hospital free of charge.

In 1849 and again in 1850 Asiatic cholera raged in Milwaukee. "Sad scenes marked these epidemics. Patients were frequently deserted by family and friends. Men, women, and children fell dying in the streets. The Poor Home burying ground was pressed to the limit. Corpses were piled into rough boxes and buried in ditches.

Through all of this the Sisters of Charity and some of the physicians gave heroic service and the hospital, though overcrowded, proved a blessing." (See Frank's Medical History of Milwaukee.) In 1850 a vessel with Swedish and Norwegian immigrants, all attacked by typhus fever, landed in Milwaukee. Seven of the passengers had died on the way from Buffalo and thirty died after the ship landed. Here again the Sisters' little hospital performed heroic service in caring for the sick and saving lives. Subsequently the hospital was made use of as an affiliated institution in the Marine Hospital Service of the federal government (now a part of the Public Health Service) and this service has continued to the present. For over 126 years the federal government has provided medical and hospital treatment for seamen of American ships. In some ports it maintains Marine Hospitals, in others it makes arrangement with civil institutions to provide this care at a rate agreed upon. In addition to caring for the seamen the infirmary gave shelter to the homeless sick of Milwaukee and the surrounding territory.

(To be continued in our next issue.)

INTER-STATE ASSEMBLY AT ST. PAUL

The 1925 session of the Inter-State Post Graduate Assembly of America will be held at the St. Paul Auditorium the week beginning October 12th. Headquarters for the meeting is the St. Paul Hotel, to which all requests for hotel reservations should be sent. In case the St. Paul Hotel is filled, reservations will be made in neighboring hotels of St. Paul.

The sessions will open at 7 A. M., Monday, October 12, and continue through Friday following. Distinguished guests of the Assembly will include Lord Dawson of Penn, London, personal physician to King George; Sir William Arbuthnot Lane, London, England; Mr. William Blair Bell, F. R. C. S., professor of obstetrics and gynecology, University of Liverpool Medical Dept., Liverpool, England; Professor Vittorio Putti, Bologna, Italy; Mr. Philip Franklin, F. R. C. S., London, England; Dr. H. L. McKisack, consulting physician, Royal Victoria Hospital, Belfast Ireland, and Dr. W. M. Parkes, C. M. G., C. B. E., Auckland, New Zealand.

Journal Publishes Codification of Wisconsin Statutes Covering Field of "Treating the Sick"

Because of the fact that the revision of the Wisconsin Statutes will not be published for several months, and because no opportunity exists even then to obtain a complete statement of Wisconsin laws on the subject of "treating the sick" except by purchase of a complete set of the statutes, The Wisconsin Medical Journal is herewith publishing such a codification. This material has been proof-read six times in the effort to avoid a single error. Obviously, however, this Journal and its publishers, the State Medical Society of Wisconsin, cannot guarantee the reader that no error exists. There can be no official copy of statutes except as provided by law, either through the Secretary of State or the Revisor of Statutes.—Editor's Note.

GENERAL INDEX.

- Basic Science Law—147.01-147.12, inclusive.
 Board of Medical Examiners—147.13-147.22, inclusive.
 Chiropractic—147.23, subsections 1-8, inclusive.
 Midwifery—150.01-150.06, inclusive.
 Chiropody—154.01-154.06, inclusive.
 Masseurs—147.16 ff.
 Who may use title "Doctor", "Specialist", etc.—147.14 (3).
 Revocation, Causes for—147.20.
 Exceptions 147.01 (2) and 147.19.
 Penalty for Violation—147.21; Midwifery—150.06; Chiropody—154.06.
 Summary—See last page.

CHAPTER 147

TREATING THE SICK

(This is not an official publication.)

147.01 (1) **Definitions.** The "basic science law" is sections 147.01 to 147.12, inclusive, and as used therein:

To "treat the sick" is to examine into the fact, condition, or cause of human health or disease, or to treat, operate, prescribe, or advise for the same, or to undertake, offer, advertise, announce, or hold out in any manner to do any of said acts, for compensation, direct or indirect, or in the expectation thereof.

"Disease" includes any pain, injury, deformity, or physical or mental illness or departure from complete health and proper condition of the human body or any of its parts.

The "basic sciences" are anatomy, physiology, pathology and diagnosis.

The "board" is the state board of examiners in the basic sciences.

(2) Sections 147.01 to 147.12, inclusive, shall not

apply to or affect persons making application for examination or registered or licensed or holding a certificate, or otherwise authorized or to be authorized under chapter 152, (dentists or dental hygienists), or to optometrists.

147.02 **Practice.** No person shall treat, or attempt to treat, the sick unless he shall have a certificate of registration in the basic sciences, and shall have recorded the same with the county clerk in the manner provided in section 147.14, and shall have complied with all other requirements of law. This section shall not affect the exemptions provided by subsections (1) and (2) of section 147.19, nor shall it be construed to require a certificate of registration in the basic sciences for the practice of nursing by persons registered under chapter 149.

147.03 **Board.** The governor, with the advice and consent of the senate, shall appoint the state board of examiners in the basic sciences. The board shall consist of three lay educators, none of whom shall be on the faculty of any department teaching methods of treating the sick. The term of office shall be six years. A vacancy shall be filled for the unexpired term. The first appointments shall be for terms expiring April 1, 1927, 1929 and 1931, respectively. The board shall within thirty days of appointment organize by the election of a president, secretary and treasurer. The compensation of the members of the board shall be ten dollars for each day actually spent and actual and necessary expenses.

147.04 **Other Boards.** No examining board for any branch of treating the sick shall admit to its examinations or license or register any applicant unless such applicant first present a certificate of registration in the basic sciences. Any such board may by rule accept such certificate in lieu of examination in those subjects.

147.05 **Application.** Application for a certificate of registration in the basic sciences shall be made to the board of examiners in the basic sciences, accompanied by sufficient and satisfactory evidence of good moral character and preliminary education equivalent to graduation from an accredited high school of this state, and a fee of ten dollars. If the applicant was on February 1, 1925, attending a professional school, high school education shall not be required.

147.06 **Examination.** Examination shall be in the basic sciences only, shall be conducted not less than four times a year at such times and places as the board shall fix, and shall be both written and by demonstration or other practical test. No applicant shall be required to disclose the professional school he may have attended or what system of treating the sick he intends to pursue.

147.07 **Certificate.** If the candidate attains a grade of seventy-five per cent in each subject, he shall receive a certificate in the basic sciences, signed by the president and secretary. If he fails in one subject only, he may be re-examined in that subject at any examination

(Continued on Page XXII.)

THE JOURNAL BOOK SHELF

Medical Education—A Comparative Study. By Abraham Flexner, Secretary, General Education Board, New York. The Macmillan Company, New York City, 1925.

Chemical Dynamics of Life Phenomena. By Prof. Otto Meyerhof. J. B. Lippincott Company, Publishers, Philadelphia and London.

A Manual of Diseases of the Nose, Throat and Ear. By E. B. Gleason, M. D. W. B. Saunders Company, Publishers, Philadelphia and London.

Insanity and Law. By H. Douglas Singer, M. D., M.R.C.P. (London). Professor of Psychiatry, University of Illinois College of Medicine; formerly State Psychiatric Institute in Illinois; and William O. Krohn, A.M., M.D., Ph.D., author of Practical Lessons in Psychology; First Book in Physiology and Hygiene; formerly Resident Psychologist at Kankakee State Hospital; Head of Department of Psychology at Western Reserve University and at the University of Illinois; six years Medical Juror in Cook County (Chicago) Insanity Court. Cloth, pp. 437. P. Blakiston's Son & Co., Philadelphia, 1924.

Pediatrics. Vol. IV. By various authors. Edited by Dr. Isaac A. Abt, M.D. W. B. Saunders Company, Philadelphia and London.

Text-Book of Pathology. By William G. MacCallum, M.D., Professor of Pathology and Bacteriology, Johns Hopkins University. Third edition, thoroughly revised. Octavo volume of 1,162 pages with 575 original illustrations. Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$10.00 net.

How Is Your Heart? Intimate Talks on the Prevention of Heart Disease and on the Care of an Already Damaged Heart. By S. Calvin Smith, M.S., M.D. Boni and Liveright, New York City.

The Cornell Clinic, 1921-1924. Medical service on a self-supporting basis for persons of moderate means. A report issued by the Committee on Dispensary Development of the United Hospital Fund of New York, Michael M. Davis, executive secretary. April, 1925. New York City.

Lectures, Clinics and Discussions on Electro-Physiotherapy. Held at Logan Square Masonic Temple, Chicago, October 20 to 24, 1925, under the auspices of H. G. Fischer & Company, Inc., Chicago.

A Manual of Physical Diagnosis. By Austin Flint, M.D., LL.D., late professor of the principles and practice of medicine and of clinical medicine in Bellevue Hospital Medical College. Ninth edition, revised by Henry C. Thacher, M.S., M.D., attending physician, Lincoln Hospital and assistant attending physician, Roosevelt Hospital, New York. Illustrated. Price, \$3.25. Lea & Febiger, Philadelphia and New York, 1925.

Medical Clinics of North America. Boston Number, May, 1925. Volume VIII, Number VI. Octavo of 278 pages and 47 illustrations and complete index to Volume VI. Paper, \$12.00; cloth, \$16.00. W. B. Saunders Company, Philadelphia and London.

Surgical Clinics of North America. New York Number, April, 1925. Volume V, Number II, 337 pages with 105 illustrations. Paper, \$12.00; cloth, \$16.00 net. W. B. Saunders Company, Philadelphia and London.

Personal Hygiene Applied. By Jesse Feiring Williams, M.D., Prof. of Physical Education, Teachers College, Columbia University, New York City. Second edition revised. 12mo of 414 pages, illustrated. W. B. Saunders Co., Philadelphia and London, 1925. Cloth, \$2.00, net.

Clinical Medicine for Nurses. By Paul H. Ringer, A.B., M.D., Chief of Medical Service of the Asheville Mission Hospital, Asheville, N. C.; on staff of Biltmore Hospital, Biltmore, N. C. Illustrated. Second revised edition. Price, \$2.50. F. A. Davis Company, Philadelphia, 1924.

A Textbook of Practical Therapeutics. With special reference to the application of remedial measures to disease and their employment upon a rational basis. By Hobart Amory Hare, B.Sc., M.D., LL.D., Prof. of Therapeutics, Materia Medica, and Diagnosis in the Jefferson Medical College of Philadelphia. Nineteenth Edition. Enlarged, thoroughly revised and largely rewritten. Illustrated with 144 engravings and 8 plates. Price, \$7.00. Lea & Febiger, Philadelphia and New York, 1925.

BOOKS RECEIVED FOR REVIEW

American Illustrated Medical Dictionary (Dorland). New (13th) edition, revised and enlarged. A complete dictionary of terms used in medicine, surgery, dentistry, pharmacy, chemistry, veterinary science, nursing, biology, and kindred branches; with the pronunciation, derivation and definition. Large octavo of 1344 pages with 338 illustrations, 141 in colors. Containing over 2,500 new words. W. B. Saunders Company, 1925, Philadelphia and London. Flexible binding, \$7.00, net; thumb index, \$7.50, net.

A Text-Book of General Bacteriology. By Edwin O. Jordan, Ph. D., Prof. of Bacteriology in the University of Chicago and in Rush Medical College. Eighth edition, thoroughly revised. Octavo of 752 pages, fully illustrated. W. B. Saunders Company, Philadelphia and London, 1924. Cloth, \$5.00, net.

Preventive Medicine. By Mark F. Boyd, M. D., C. P. H., Member of regular field staff, international health board of Rockefeller Foundation. Second edition, revised. Octavo volume of 429 pages with 135 illustrations. W. B. Saunders Company, Philadelphia and London, 1925. Cloth, \$4.00, net.

Physical Chemistry in Biology and Medicine. By J. F. McClendon, Ph. D., Prof. of Physiologic Chemistry, University of Minnesota Medical School. Octavo of 425 pages, illustrated. W. B. Saunders Company, Philadelphia and London, 1925. Cloth, \$4.50, net.

A Manual of Gynecology. By John C. Hirst, M. D., Associate in Obstetrics, University of Pennsylvania. Second edition, revised, consisting of 508 pages with 195 illustrations. W. B. Saunders Company, Philadelphia and London, 1925. Cloth, \$3.50, net.

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BOOK REVIEWS

WILLIAM A. MOWRY, M. D.,
Editor

Any scientific publication reviewed in this column may be obtained for inspection. Orders for such inspection should be directed to Mr. W. M. Smith, Librarian, Medical Library, University of Wisconsin, Madison, and should be placed through your local librarian wherever possible. Where there is no local librarian orders may be sent direct. These new books will be loaned for an inspection period only.

Practice of Pediatrics. By Charles G. Kerley, M. D. Formerly Professor of Diseases of Children, New York Polyclinic Medical School and Hospital, and Gaylord W. Graves, M. D., Associate in Diseases of Children in the College of Physicians and Surgeons, New York City. Third Edition, revised and reset. Octavo of 922 pages, 150 illustrations, Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$9.00 net.

Always a well known book, Kerley's Pediatrics in its 3rd edition is a much better book in 1925 than its 2nd edition was in 1917. Unlike so many books that advertise a revision and only contain a few minor changes, it has been thoroughly revised and made into a really up-to-date book. Many of the chapters have been so much enlarged and improved that old acquaintances of the 2nd edition will hardly recognize them in their new form. This applies particularly to the chapters on Growth and Development, Methods of Infant Feeding, Rickets, Asthma, Acute Intestinal Intoxications and Special Diagnostic Methods.

The revision also includes several entirely new chapters such as those on Encephalitis Lethargica, Acrodynia and Coeliac Disease. To all of the newest material throughout the book, foot note references are given to the original article.—J. E. G.

A Compend of Gynecology. By William Hughes Wells, M. D., Late Asst. Prof. of Obstetrics in the Jefferson Medical College; Asst. Obstetrician in the Maternity Dept. of the Jefferson Medical College Hospital. Fifth Edition, revised and enlarged, with 167 illustrations. Price \$2.00, net. P. Blakiston's Son & Co., Philadelphia.

This book is recommended to all members of the profession who are desirous of having a handbook on newer methods and principles of gynecology. Due to the limited space, the descriptions of operations and tests are very brief but concise. For that reason it should prove very valuable to the busy practitioner who does not want a more detailed treatise on this subject.

The present revised Fifth Edition presents the modern idea on such subjects as Sterility, Treatment of G. C. Rubin's Test, Glycosuria Test of Pregnancy and the use of X-rays and Radium in treatment of Cancer and Fibroids.

There is, however, one criticism that must be made regarding the method of prescription writing. All prescriptions are written in Apothecary system which is inconvenient for those accustomed to the metric system.

—I. A. B.

New and Nonofficial Remedies, 1925, containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Jan. 1, 1925. Cloth. Price, postpaid, \$1.50. Pp. 461+XL. Chicago: American Medical Association, 1925.

New and Nonofficial Remedies is the publication of the Council on Pharmacy and Chemistry through which this body annually provides the American medical profession with disinterested critical information about the proprietary medicines which are offered to the profession and which the council deems worthy of recognition. The book also contains descriptions of nonproprietary medicines which the council considers worthy of consideration.

In addition to a statement of the actions, uses and dosage of each product, many of these are arranged in classes and these classes are introduced by a general discussion of the group; thus the silver preparations, the iodine preparations, the arsenic preparations and the biologic products are preceded by a thoroughly up-to-date discussion of the group.

A glance at the preface shows that, in addition to the description of the new drugs which were accepted during the past year, the book has been extensively revised; many of the preparations listed in the previous edition have been omitted and the statements of the properties of others have been revised to bring the descriptions in accord with present day knowledge. Of particular interest is the revision of the general articles; thus the article on endocrine products has been entirely rewritten to bring this chapter in accord with the series of articles on glandular therapy which were published in 1924 under the auspices of the council. A general article on medicinal dyes has been added.

A section of the book (brought up-to-date each year) gives reference to proprietary articles not accepted for New and Nonofficial Remedies. This list, in conjunction with the book proper, constitutes a cumulative index of proprietary medicines which physicians may consult when some proprietary product is brought to their attention.

Physicians cannot dispense with the newer remedies that are being brought out, yet they can neither judge them on the basis of the manufacturers' claims nor have they the opportunity or time to determine their merits. For this reason every physician should possess a copy of the annual volume of New and Nonofficial Remedies which the Council on Pharmacy and Chemistry puts at his disposal.

THE TREATMENT OF SYPHILIS

A working monograph on the treatment of syphilis has been prepared for the medical profession by the Dermatological Research Laboratories which will be sent with the compliments of the publishers to any physician requesting a copy.

Requests for this monograph should be addressed either to The Abbott Laboratories, Chicago, or the Dermatological Research Laboratories, Philadelphia.

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OH, DOCTOR, DOCTOR!

By H. A. J.

Generally I avoid the so-called screen version of any play that I have seen or book that I have read. In my opinion the proper word is not version, but perversion. The possibilities of setting and visualization are much greater on the screen, of course, than in any book or play, and yet these masters of the unspoken drama always leave out just the parts that interest me most. Whatever beauties of scene they inject are always compensated for by the extraction of the intellectual appeal—everything must be sacrificed to make the picture comprehensible to the most haphazard intelligence.

The screen version of "The Beggar on Horseback" is what started these reflections on movie art. When I saw the play last winter I thought it one of the best comedies I had ever seen. Some crudities there were, to be sure—three over-stuffed dames just in front of me thought the play was worth discussing in detail right then and there, and so I missed a good many witticisms from the stage—but on the whole I forgave the self-satisfied murmurs, because they showed a comedy as great as that going on on the stage. The reaction of the audience, in fact, was even more interesting than the play which caused it. In face of this really savage satire on the American manner of living the audience went on munching chocolates, gabbling, and indulging in unconscious self-congratulation. The attitude was not even "There, but for the grace of God, goes John Bunyon," (or whoever it was that first said it). Although there was a sting in the play for every sort of person, almost no one in the audience remotely imagined that it could apply to himself.

Yet there was a good deal in the play, especially in the things which were implied, but not expressed. The unrelieved ugliness of the stage settings, for instance, (with the exception of the musical interlude), could only have been intended as a commentary on the well-known American rococo style of interior decoration.

In the moving picture adaptation all this was changed and simplified. The satire which, in the stage production could be applied generally, was cut down into the old, threadbare attack on dollar-chasing. This of course made it a sure-fire hit, because the simple point of the story was enforced and re-enforced with sledge-hammer blows, so that it could not possibly be missed. But the greatest crime, in my opinion, was the injection of beautiful settings where they didn't belong. Bizarre effects were sometimes produced, and indeed were quite in keeping with the nightmare nature of the piece, but I think even these, as much as the strictly beautiful portions, shifted the focus of interest from what was going on to where it was taking place.

I suppose a sententious moral might be drawn from this—something to the effect that the movies wish to capitalize the popularity of literary and dramatic productions, without intending to produce any greater resemblance than the title—but I am not interested in drawing it. Let it be sufficient to point out, that if you have seen the play or read the book, don't see the screen version and vice versa. You will almost certainly have two bad tastes in your mouth instead of one good one.

If "Some Teacher Can See the Point"; Doctors Should

The following letter was received this month by a Milwaukee physician. The member regrets his inability to apply the suggestion but thought that its merit should win for it publication in the Journal—in the Oh, Doctor, Doctor column.

Caldwell, Idaho, August 20th, 1925.

Dear Doctor—

My proposed Bee Cure is simply giving the patient the air from a thriving hive of bees to breathe. The Bee Cure has never been proven and I am not a physician.

The law in Idaho prohibits my introduction of the Bee Cure until after it has been proven a success.

I turn to the physicians of other states, always remembering that a specific law forbids one who is NOT a licensed physician attempting to heal diseases. Therefore when this letter falls into the hands of laymen they will recall that no attempt must be made to use the Bee Cure except it be prescribed by a doctor in good standing in his state.

To doctors, let me state, that my idea is to set the bee hive outside of the sick room and run a hose from it

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The Present Status of Radiotherapy of Malignancies*

BY H. R. FOERSTER, M.D.,

Milwaukee.

Radiotherapy of malignancies, by which is meant treatment with roentgen rays or radium, has in its short span of less than thirty years of existence, suffered from alternating cycles of optimism and pessimism and their attendant ills. The recent period of optimism, following the heralded European cures of cancer by means of extremely high voltage X-rays, massive doses of radium, and ultra-scientific methods of dosage measurement, swept this country with a wave of hasty and unreasoned enthusiasm that led many into pitfalls of disaster. At the last German Congress of Radiologists that eminent pioneer, Professor Holtzknecht, stated that the field of carcinoma therapy is in a serious condition. I present this paper with the hope of clarifying some present conceptions and misconceptions regarding this interesting and important method of combating cancer.

The subject of radiotherapy of malignancies divides itself naturally into two phases. One deals with cutaneous localized lesions, the other with deep-seated and metastatic lesions. The *objects* in view, the *means employed*, and the *methods* of treatment all vary materially in these two types of disease.

OBJECTS AND MEANS

In the case of cutaneous lesions the object of treatment is usually the destruction, by non-surgical means, of the malignant growth, and this is usually accomplished by the use of long wavelength, soft, readily absorbed, unfiltered X-rays generated by apparatus of low voltage, or by the use of small quantities of radium, usually in the form of flat applicators, from which the softer radiations are utilized.

The object of treatment in the case of deep-seated or metastatic lesions cannot often be the direct destruction of the malignant tissue, and usually concerns itself with attempts to inhibit the

damage by acid. As this diacetic acid accumulates activity of the disease and to increase the local body defenses. This type of radiotherapy requires supportive medical measures and frequently justifies itself by a material prolongation of life in comparative comfort, though the patient in most instances ultimately succumbs to the disease. This type of treatment is also frequently employed as a preliminary to surgical extirpation or as a post-operative procedure. Such pre-operative and post-operative employment of radiotherapy, distinct from that of the treatment of post-operative recurrences, is a procedure of growing importance, which, because of both scientific and practical clinical reasons, is likely to become a routine procedure. An additional, though questionable, use of radiotherapy is for palliation of pain and functional disability in advanced, terminal stages of some cancer processes.

Deep-seated primary and deep or superficial metastatic malignancies are usually treated with short-wave length, hard, penetrating X-rays filtered through metal screens of varying thickness, to exclude the soft rays, and obtained from machines employing extremely high voltage. The high voltage generators are necessary to obtain rays of sufficient penetration in sufficient quantity to properly irradiate deep-seated lesions. In the case of radium these latter lesions are treated by radium packs, containing relatively large quantities of radium in heavy metal containers, or by the employment of radium in metallic needles or radium emanation gas in minute glass tubes, these latter two types of containers being imbedded in the malignancy.

There are, of course, exceptions to the above quoted generalities when large quantities of heavily filtered radium or filtered X-rays are chosen in the treatment of superficial lesions or when the soft, unfiltered rays are used in advanced stages of cancer. Examples of the former are some epitheliomas of the ear and lip and of the latter some metastatic carcinomas of the skin.

*Read before the Milwaukee County Radiological Society, Milwaukee, April 3, 1925.

METHODS

The method of treatment employed varies within wide limits, depending upon the individual case and the individual directing the treatment. This is at the same time the most difficult and the most important consideration in radiotherapy. Experience, knowledge, clinical judgment and skill come into play here and are often the determining factors in the outcome of a given case. It cannot be too emphatically stated that in radiotherapy, as in surgery, internal medicine and the other special branches, the individual equation of patient and doctor is of paramount importance. There is too prevalent an impression among physicians, as among the lay public, that X-rays are merely X-rays and that radium is radium, and that their employment in the treatment of disease is a simple mechanical procedure. Nothing could be farther from the truth. Dr. Wm. A. Pusey, a pioneer in this field, remarked recently that he believed he had frequently obtained better results in the treatment of cancer in his early days, with apparatus now antiquated, than are often obtained at the present time in similar cases treated with most modern equipment. Béclère, in a recent investigation of post-operative X-ray treatment of breast cancer, observed that in certain German clinics where massive high voltage therapy was employed there was a higher percentage of recurrences than in those cases that were not irradiated, while in those clinics using older equipment and the older divided dose method, there were fewer recurrences than when surgery was not followed by X-rays. Technical advances have, of course, been of the utmost importance in the progress of radiotherapy and, other things being equal, better results should follow the proper use of better equipment. There is, however, no such magic as some would have us believe, that, by employing given physical factors, one may turn on the switch for a "carcinoma dose" or a "sarcoma dose" and, ipso facto turn out a patient harboring a dead carcinoma or a dead sarcoma. Experience during the last four years in this country has shown that translating the work of competent foreign radiotherapists too literally has frequently resulted in a premature dissolution of the host. The German school of radiologists, who through close co-operation with expert physicists, had first elaborated high voltage apparatus and thoroughly scientific physical

methods of dosage measurement, have learned that there is a patient back of each cancer whose tissue reactions are not subject to physical measurements. Their years of exhaustive, truly scientific work, have led to the admission by Holtz-knecht that their beliefs, "that all carcinomas behave alike, that small doses stimulate, and that 100 per cent of the skin unit dose is the destructive dose," were erroneous. The upshot of all this has been a forsaking by many of the massive, single dose technique for the saner more conservative method of divided dosage over longer periods of time.

CLINICAL CONSIDERATIONS

In the treatment of a cutaneous epithelioma, of either the squamous or basal cell type, or of a cutaneous sarcoma, by either roentgen rays or radium, the lesion is frequently observed to vanish without visible reaction, or with only mild inflammatory manifestations, leaving in its wake a slightly atrophic area of epidermis or absolutely no indication of abnormality in the skin at the previous site of the lesion. This is clearly the most ideal method of removing a malignancy and is the method of choice in the treatment of such lesions situated on the eyelids, earthus regions and alae of the nose. In other regions, as the lips, ears, hands, feet, fingers and flat surfaces, radiotherapy is in most cases to be preferred, though consideration must be given to surgical removal by means of scalpel or electro-thermic methods. It is extremely important for the radiotherapist to recognize contra-indications to his type of treatment, that the more radical surgical intervention may be carried out before conditions for such intervention become less favorable.

Lesions failing to respond promptly to radiotherapy, or recurring after such treatment, invasive types of growths with ramifying strands extending deeply into the subcutaneous tissues or involving cartilage, bone, or muscle fascia, recurrences in post-operative scars, and ulcerative lesions showing secondary infection, are frequently unfavorable cases for radium and especially for X-rays.

Mucous membrane lesions for anatomical and technical reasons, are preferably treated by radium and usually show better response to radium than to X-rays. However, in this latter class of cases, where the introduction of radium needles or

emanation tubes into the tissue replaced the use of surface applications, surgical diathermy, followed by radium or X-rays, is the treatment of choice. Very early lesions of the buccal mucosa, however, are still considered favorable for treatment with radium plaques, and lesions in the floor of the mouth with radium packs. Present opinion favors electrothermy for the destruction of cancer of the tongue and buccal wall, with roentgen rays to the areas of lymphatic drainage and with consideration of surgical dissection only in those cases where glandular enlargements persist. The employment of radium packs, or the implantation of emanation tubes, with or without surgical measures, have also found favor in the treatment of metastatic glandular lesions. Too much attention cannot be directed toward metastatic glands which often seal the fate of the patient in spite of successful destruction of the primary lesion. Prophylactic irradiation of gland bearing tissue in the areas of lymphatic drainage, even in the absence of palpable glands, may be a life-saving measure.

In the treatment of subcutaneous or deeply seated malignancies or massive superficial lesions, such as breast carcinoma, the roentgen rays usually have preference over radium, though the two may frequently be combined to advantage. It is assumed that in such cases surgical measures are given preference and that radiotherapy is employed only when, in the opinion of a competent surgeon, operation is deemed inadvisable, or when it is intended to employ these measures as a corollary to surgery. When the growth is quite localized massive doses are employed, to the limit of tolerance of normal tissues, but when large areas of the body surface must be rayed, or where vital structures are involved, such dosage is frequently inadvisable and dangerous. The extremely heavy X-ray dosages recently in vogue, while often producing remarkable results in apparently hopeless cases, have also introduced disastrous sequelae such as pulmonary fibrosis, aplastic anemia, fatal hemorrhages into necrotized tumors and severe chronic roentgen cachexia. The frequent persistence of the malignancy, or its early recurrence, in the face of such extreme measures, has resulted in the adoption of a more conservative technique.

Theilhaber states that large roentgen ray doses reduce cellular immunity practically to extinction, thus favoring recurrence after removal of a cancer, while Jüngling has observed that partial doses

administered at intervals of weeks and months during the latent period of a cancer are cumulative and equivalent to single massive dosage, and are productive of many good results in the prophylactic irradiation for post-operative mammary carcinoma.

Robert Knox, formerly president of the British Roentgen Society, may be quoted as follows: "The method of the small dose at frequent intervals is one which has had an extended trial and by which results have been achieved. It is not always necessary to give one large dose at one sitting in an endeavor to administer a lethal effect. The injurious effects upon the patient are a contra-indication to such heroic treatment. Surely a method of treatment which may so severely damage the normal tissues that further treatment cannot be given for six or eight weeks is not only unnecessary, but entirely unscientific, and particularly undesirable if the desired effects can be induced by any other means."

BIOLOGICAL CONSIDERATIONS

The manner in which radium or roentgen rays destroy malignant lesions depends upon the type of lesion and the type of treatment. Ewing recognizes three types of action, *autolytic*, *destructive* and *restraining*. The first is the ideal type of treatment for the superficial lesions first described and apparently depends primarily upon a selective radiosensitivity of the component elements of the malignancy. Claude Regaud of Paris, in speaking of radio-physiology before the American Radium Society, stated that "there exists between different organs, between different tissues of the same organ, between different cell types of the same tissue and also between different physiological phases of the same cellular species, differences in radiosensitivity." To bear this out he reported a series of very carefully controlled experiments. "In a testis, an ovary and a thymus sterilized by a selective radiation, there is no visible trace of a vascular lesion, nor is there a modification of the connective tissues. It is absolutely impossible to accept a dystrophy of vascular origin, a sclerosis of connective tissue, as immediate causes of the suffering and death of the sensitive cells. The same rule applies to cancer."

Regaud states that the leucocytes exert no influence in the irradiated cancer tissues but subsequent to the death of the radio-sensitive cells, leucocytes remove the debris. This is not in accord with

Murphy's views, deduced from animal experiments, that the main effect of radiation of malignant tumors is due to a reaction set up in the surrounding healthy tissues rather than to any effects on the tumor cells. The preponderance of work along these lines favors the views expressed by Regaud.

Perthes states that the time of cellular division is the moment of greatest radiosensibility and that the fundamental basis on which rests the selective destruction of cells by radiation is the difference in radiosensitivity which is particularly pronounced in cells in the act of division or about to divide.

Regaud applies the principals of selective action to his treatments, carrying them out in small dosages over periods of 6 to 10 days, and his results are very good.

The *destructive* action is obtained by using softer radiations, particularly by employing the beta rays of radium, and when used in this manner radium destroys the exposed lesion in the manner of caustic, destroying also the contiguous normal structures. There is, however, the additional radiation effect of harder, more penetrating rays beyond the zone of destruction, making radium in some ways the best caustic.

The destructive action of radium is best obtained by the implantation of radium emanation tubes which results in the formation of localized sloughs.

The *restraining* action of radiotherapy is that action which inhibits the activity of a malignant process and at the same time reinforces the body defenses by stimulating the phagocytes, increasing the deposition of fibrous tissue in the periphery of the lesion and inducing bio-chemical and bio-physical reactions in the tissue fluids and structures. The reaction of the tissues is an essential factor in the curative process and when that reaction fails no amount of radiation succeeds in killing the cancer cells. It is this restraining action on which we must depend in the treatment of deep seated malignancies and of extensive metastases for in these cases the so-called "lethal dosage" cannot be successfully employed.

CONCLUSIONS

In conclusion it may be stated that in radiotherapy we have an exceedingly powerful weapon in the fight against cancer, a weapon that, when

properly used, has indisputably proved its worth and gained a firm foothold in the front rank. Destruction of hopelessly inoperable cancers and successful palliation in innumerable incurable cases, in addition to the cures of pre-cancerous and early cancerous lesions, are all the evidence necessary to prove this point. That we may know the exact manner in which such radiation works, whether by direct lethal action on malignant cells, or indirectly through action on normal tissues or body fluids, is immaterial from this point of view, the fact that it actually does accomplish these results is all the evidence the patient demands, and we possess such evidence. What intelligent physician would withhold the use of mercury in syphilis or of quinine in malaria because of lack of evidence of their exact bio-chemical or bio-physical action? Equally fallacious are the arguments advanced by some of our colleagues against the value of radium or X-ray in cancer because of statistical evidence that there may be more cancer deaths now than before the introduction of these measures. Statistical evidence of an increase of syphilis would surely not mitigate against arsphenamine therapy. It is not intended that radiotherapy should displace surgery, except in the previously specified types of cutaneous and mucous membrane malignancies and in certain other lesions including some gynecologic conditions. I believe we are all agreed that early proper surgery is our main hope in internal cancer and in extensive superficial cancer, including that of the tongue and breast.

As I understand it, radiotherapy is *one* form of attack in cancer, to be intelligently employed alone or conjunctly with other measures, or not to be employed, depending upon the indications of the individual case.

Cancer deaths unfortunately will continue, and X-rays and radium will fail, time and again, as in the past. But with continued improvements in equipment and technique and with a continued increase in the already appreciable amount of scientific knowledge on the physical and physiological action of these agents, and above all on the clinical results of widely diverging methods of treatment, increasing numbers of recoveries and of palliative results by radiotherapy must surely be recorded.

Considering all that has been accomplished in less than thirty years, and that in the face of opposition, prejudice and indifference, we can surely face the future of radiotherapy with optimism.

Cataract Operation by Suction, the Barraquer Method*

BY SAMUEL G. HIGGINS, M.D.

Milwaukee

The accepted cataract operation has for years been expression of the lens immediately following the rupture of its anterior capsule by capsulotomy. This expression was accomplished with loss of a minimum of soft lens material in the most mature or hardened cataractous lenses. The deferring of the operation for months or years was necessary in order to allow for maturing, or what the laity term ripening. The period has been shortened by preliminary iridectomy accompanied by light mechanical massage applied to the lens, or by simply removing a small piece of the iris at the upper edge of the pupil. Some weeks or months after the iridectomy, when the opacity was noticed on inspection to be general throughout the lens, and the vision was reduced to the counting of fingers, or only to perception of light, the removal of the cataract was attempted. This was performed by cutting the anterior capsule of the cataractous lens, and applying pressure on the lower part of the cornea, when the lens was forced out through the previously enlarged pupil. The lens was seldom, if ever, removed en masse, the nicest of surgical judgment being necessary to determine how much of the soft lens matter it would be safe to leave behind without danger of exciting inflammation of the iris or ciliary muscle. The remaining lens material became opaque in older patients, rather than absorbed as in the young, and the posterior capsule left behind often became cloudy and formed what was called secondary cataract. This in turn necessitated a third operation by discession or cutting through this thin veil by the (thin) discession knife.

For a number of years, it was my practice in the management of cases at the Soldiers' Home Hospital, in Milwaukee, to plan on the third discession operation. This method can sometimes be shortened by performing iridectomy at the time of expression of the lens. This brief history is not sketched to condemn the capsulotomy operation, but rather to illustrate the delicacy of cataract surgery. On the contrary the procedure outlined is to be recommended as a means of acquiring skill in the performance of cataract operations, and it

should be the method of choice for those whose opportunities and experience must, by circumstances, be limited. Many good results are accomplished by this method, though by its employment one does not escape the *danger* of the iris becoming entangled in the incision, loss of vitreous, mechanically or traumatically inflamed eyes, infection, or other complications. If the results had been all that could be desired, other methods would not have been sought for and attempted.

The removal of the lens in toto with the entire capsule was popularized by Colonel Smith in India, from whence we have the name of the intracapsular operation, the Smith or Indian operation. When one sees for the first time the apparent pressure brought down on the eye at the lower edge of the cornea one marvels that the entire contents are not forced out. Loss of vitreous is too frequent and the method has not been universally adopted. It is indeed operation by expression.

A method of pressing the cataractous lens away from the pupil was practiced centuries ago in India and the Far East. This couching operation, done without an incision in the eye, was abandoned as the lenses were forced into the vitreous and later caused irritation of the ciliary process resulting in inflamed eyes and also in detached retinae. The ensuing clear vision was later followed by irretrievable blindness.

FIRST USE OF SUCTION

Probably the first attempt to draw out the loose lens material by suction was undertaken by Redaro whose aspirator was used during the course of the capsulotomy operation. The aqueous humor escaped, and too often vitreous was drawn into the canula. In 1910, Hulen, of San Francisco, first extracted the lens in its capsule by means of a suction apparatus. He reported six successful cases. In 1917, Professor Barraquer of Barcelona, Spain, perfected a suction pump. He uses the suction method as a routine procedure and has reported 1000 cases. The application of the Barraquer cup to the unbroken lens prevents the free vitreous from being drawn into the instrument. Barraquer has termed his operation *Facoerisis* and defines it as follows:

*Presented before the 78th Annual Meeting, State Medical Society of Wisconsin, Green Bay, August, 1924.

"Facoerisis consists in drawing the crystalline lens by its anterior surface, separating it mechanically without either traction or violence of the zonula, and extracting it completely out of the eye ball, without having produced ectopias or traumatism to the intra-ocular structures. The instrument employed, called the irisfaco, is nothing more than a pneumatic forceps and a zonulotome."

The instruments were perfected under the direction of Professor Barraquer, whose hobby is mechanics. The pump is made in Spain and requires no further modifications or alterations to improve the form of vibratory negative pressure for the lifting of the cataract. The pump is arranged for direct current. If the hospital authorities are not certain of the current in the hospital, this can be ascertained by a general electric polarity tube. The pump I use was first attached to an indirect current which resulted in imperfect action; but when the Mueller attachment was connected, the pump worked perfectly. All mechanical appliances are subject to modifications. My experience with the Barraquer tip, however, convinces me that the cup, which is applied to the surface of the cataract, requires no alterations. The adjustments of the valves in the handle, and the feeling of lack of balance of the handle, are not altogether comfortable in my hands. An advantage of Barraquer's handle is that a vacuum may be maintained by valve control when the current is turned off from the pump. Green, of San Francisco, has altered the cup and handle, making them simpler. The handle and cup made by Weiss in London I find very satisfactory.

The preparation of the patient, anesthetic, aseptic precautions, illumination and incision are practically the same as for cataract operation by any method. Any one who is performing many operations may meet with infection. In passing I may say that since I have applied tincture of iodine mixed with equal parts of alcohol to the lids, and about the nose, eyebrow, and cheek, and have worn rubber gloves, operation has never been followed by infection. I have been using with satisfaction sulfonal or elixer of luminol, instead of morphine, as the sedative before operation. Good illumination is essential when the cup is used.

Barraquer lays stress on the pre-operative ex-

amination of the lens so that one may accurately estimate the amount of suction to be applied. The usual suction, as measured by the gauge, is between 50 and 70 cubic millimeters of mercury. The older the patients, the more friable is the supporting zonula of Zinn, and the less degree of suction is required. Also, less suction is employed in soft or unripe cataracts, as excessive suction then has the effect of capsulotomy.

According to Barraquer, "by the rarefaction of the air in the tiny suction cup, it adheres to the lens which ought to fit perfectly adapted to the surface of its border deforming it, by shortening its greatest diameter, and displacing the nucleus; and as the intensity increases by the intermittence, or it may be by the smallest jerks, it imparts to the entire crystalline system a vibration sufficiently intense to rupture the fibres of the zonula; this vibration is moreover, sufficiently rapid to rupture the fibres around the lens although the movement does not reach the peripheral insertion of the same."

Iridectomy is seldom employed by Barraquer. The advantages of a clear, round, normally contracting and dilating pupil are more than those of appearance. As stated by Barraquer, "If it is a question of a more voluminous cataract, very intumescent, an iridectomy is indicated." "If we seek absolute security as to hernia of the iris by observing the advantages of simple extraction, we buttonhole the iris, sparing the sphincter pupillae, according to the technique of Hess: by this operation a small pinched up piece is cut off in the more peripheral part of the iris, with a very tiny scissors, resembling that of DeWecker, under the cornea without drawing the iris outside the wound."

The after treatment in cases of cataract is simple. I apply a bandage over both eyes; after two days the unoperated eye is uncovered. As there is little or no reaction, little treatment of the operated eye is necessary. I prefer not to uncover the operated eye for four or five days. A protecting pad is secured with adhesive strips, and as a rule in two weeks dark glasses may be worn, as further treatment is unnecessary. The usual permanent vision following cataract operations is not obtained for four or five weeks following surgical interference.

ABSTRACTS OF CASES

The following are abstracts of the hospital records of

patients on whom I operated at the Soldiers' Home Hospital in Milwaukee. The abstracts were made by Assistant Surgeons Dr. Ware, Dr. Hodge, and Dr. Dallwig.

S. H., age 82, preoperative vision OD; good light projection. OS counting of fingers at 10 feet. Barraquer operation, August 2, 1923. August 5, the patient was up in wheel chair; August 8, he was up and about; and August 10, bichloride of mercury ointment was applied daily, for ten days.

August 20, treatment was discontinued; examination showed round black pupil, with media clear, October 29, + 11.00 sphere vision was 20/30; for near, + 15.00 sphere read Jaeger II.

L. K., age 75. Barraquer operation on left eye August 6, 1923. Black pupil, apparently good result, but refraction was not obtained.

G. G., age 79, preoperative vision OD counting of fingers at 1 foot, OS fingers at 2 feet. Patient referred by family physician to Dr. Higgins for operation at Soldiers' Home. Examination October 12, 1923, revealed vitreous opacities with floating crystal bodies, central cataracts forming with atrophic optic disk. Patient insisted upon operation on right eye. Barraquer operation November 21, 1923. November 25, patient had not complained of any pain, but disturbed dressing at night. December 1, no pain, no infection, counted fingers. December 21, patient left hospital, refused refraction; showed senile dementia.

W. B., age 84. Complete extirpation of right lacrimal sac for chronic suppurative dacryocystitis, November 2, 1923. Preoperative examination showed good light projection in right eye. VOS light perception, including red light. Smears and cultures from conjunctival washings before cataract operation were negative. Barraquer operation right eye January 9, 1924. January 12, sclera deeply congested, boric irrigation, atropin one per cent, bichloride of mercury ointment, daily dressings. January 15, congestion subsided, has had no pain. January 25, 1924, scleral redness gone, patient up and about. March 10, vision in operated eye with glasses + 10.00 sphere, + 1.00 cylinder, axis 180 degrees equaled 20/40 minus, for near + 14.00 sphere, + 1.00 cylinder, axis 180 degrees Jaeger IV words.

J. C., age 77, entered with history of only light perception in both eyes for one year. Barraquer operation, April 2, 1924, left eye. April 4, anterior chamber was partially filled with blood; inflammatory postoperative reaction was very slight. April 6, anterior chamber clearing; bromides and sulfonal were ordered for restlessness. April 9, was transferred to convalescent ward. April 10, was out of bed; April 20, convalescence uneventful to date. April 28, discharged; pupil was clear black and good vision.

L. S., age 83, extremely deaf. Previous history unsatisfactory; injury to left eye years ago, but nature uncertain; opaque lens structure with light perception. Requested operation. Barraquer operation attempted June 26, 1924. Lens substance was largely absorbed, capsule grey, no loss of vitreous, and anterior chamber collapsed with suction cup in eye. Operation abandoned. June 28, there was slight pain. June 30, the

eye reddened, but no severe inflammatory reaction. July 1, eye was quite injected; July 7, was doing well; July 12, was improving daily; and July 16, convalescence was satisfactory. Capsule remaining obscured vision, but patient retained good light perception.

W. J., age 78, preoperative vision OD light perception; OS 20/200, no view of fundi obtainable. Barraquer operation July 16, 1924, of the right eye. July 20, pupil was slightly oval with some scleral congestion; July 30, redness had subsided and patient was up and about. August 5, patient was wearing dark glasses. August 15, vitreous opacities obscured clear view of the optic disk. Refraction + 11.00 sphere, + 2.50 cylinder, axis 90 degrees, vision 20/200. Vision may have been due to corpora amylacea described by Fuels, and degeneration of vitreous.

S. W. H., age 80, capsulotomy method of extraction of left cataract by Dr. Higgins in 1919 with good result. Vision right eye, light projection; mature cataract. Barraquer operation on July 23, 1924. July 25, left eye uncovered, no complaint of pain in the right eye. July 30, operated eye showed some congestion; pupil was clear and black. August 18, eye was clearing and had good vision.

J. T. S., age 35, history trauma about right eye by rifle recoil May, 1917. No visual disturbance until three months later. Preoperative examination, vision OD light perception, vision OS 20/40; diffused cataract right eye; slight clearness of margin of the right lens, no view of right fundus; left fundus hyperemic. Barraquer operation attempted August 13, 1924, but the lens would not engage, and so capsulotomy method was employed; iridectomy, cystotome incision of anterior capsule, expression of most of lens substance, irrigation of much of soft lens from anterior chamber, and replacement of cut iris; no loss of vitreous. August 15, bandage removed from unoperated eye, no complaint of pain. August 18, no pain, eye moderately red, pupillary area filled with greyish white lens substance. Atropin 1 per cent instilled, bichloride ointment and eye pad applied.

The following are notes which I have made on private patients:

A. M., age 58, gave history of failing vision for two years; vision OD reduced to counting of fingers at 20 feet, vision OS good light projection. Barraquer operation on left eye March 31, 1924. April 3, eye dressed, slight redness. April 5, patient sitting up. April 10, patient left hospital. April 27, + 10.00 sphere, + 0.75 cylinder, axis 180 degrees equaled 20/20.

J. R., age 29, myopic, vision failing for two years. Wassermann negative, urinalysis negative; patient attributed cataracts to occupational exposure to furnace heat with which I did not agree. Preoperative examination gave vision OD light perception; vision OS counting of fingers at 3 feet; no distinct view of fundi. Red reflex seen about margin of central cataract with fully dilated pupil of right eye. Barraquer operation on right eye July 16, 1924. Lens nearly half size of the usual lens, engaged in the cup nicely, and was extracted completely. Middle of the lens was opaque with all margins clear. July 18, removed bandage, permitted left eye to be un-

bandaged, inspected the right eye, which showed slightest reaction; permitted patient to have back rest up in bed, and soft diet. July 21, noticed pupil drawn upward. Atropin 1 per cent put in the eye and bichloride ointment and eye pad applied. July 25, aspirin ordered for headache. July 26, eye quiet, patient permitted tub bath, and was up and about. July 30, left hospital. August 2, patient was wearing dark glasses. August 18, refraction —3.00 sphere, vision equaled 20/200.

DISCUSSION OF CASES

I regret that Dr. F. H. Haessler was unable to be present today and report the slit lamp and corneal microscope examinations we made together of patients I was able to induce to go to his office.

Examination of the Barraquer eye of patient G. G. showed slightly oval pupil, no lens capsule or hernia of vitreous. Vitreous opacities were numerous, and there was atrophy of the optic nerve, circumpapillary choroidal atrophy, and sclerosis of some choroidal vessels.

The unoperated eye showed yellowish glistening bodies probably in the vitreous, possibly asteroid hyalitis arranged in concentric spherical surfaces.

W. B., whose vision with glasses was 20/40 minus, showed a thin veil over vitreous extending more than 1 mm. into anterior chamber from nasal margin of pupil, and down to the level of the posterior surface of the iris at the temporal edge of the pupil. The surface of the veil was slightly undulating.

W. J. The cornea was clear and the pupil slightly elongated horizontally with the nasal edge applied to the cornea near the limbus. The cornea showed a fine streak of iris fibres caught in the posterior edge of the corneal incision. The cornea was slightly raised over the level of the sclera on the nasal side. Vitreous was on a level with the posterior side of the iris, except for slight projection in the nasal one-fourth of the pupil as far anterior as the anterior surface of the iris. Floating vitreous opacities were present.

J. R. The cornea was clear and the pupil drawn upward with iris fibres caught in the posterior edge of the upper corneal incision. Vitreous was on a level with the anterior edge of the iris in the lower half of the pupil, with bulging into the anterior chamber reaching to the posterior surface of the cornea at the upper limbus.

Ophthalmoscopic examination of this patient revealed vitreous opacities, retinal degeneration with choroidal atrophy about the macula, and optic nerve atrophy.

J. C. Vitreous was on a level with the posterior side of the iris, with gradual arching in the pupil reaching its height at the edge of the nasal third of the pupil, then dropping at the iris to the posterior surface of the iris.

CONCLUSIONS

The following conclusions are based upon my experience with the Barraquer technique in subjects ranging in age from 29 to 84 years.

1. If the results obtained by the capsulotomy operation were all that could be desired, intracapsular operations would not have been attempted.

2. The Smith, or Indian, intracapsular operation is too frequently attended with loss of vitreous.

3. The Barraquer operation is the perfected suction operation for cataract, removing the whole lens with its capsule.

4. Iridectomy as recommended by Barraquer, leaving the sphincter pupillae intact, may overcome the oval pupils made by beginners in the suction operation.

5. That the Barraquer operation is a safe procedure is attested by the number of cases in which I have used it in patients with diseased vitreous; such patients are bad risks for cataract extraction.

6. Some of my extractions were followed by varying degrees of hernia of the vitreous, as mentioned by Peter. The hernias were not the cause of poor vision in my cases, the cause was found in the diseased vitreous or fundus.

7. The suction method is not applicable in cases of traumatic cataract in young subjects.

8. If the beginner does not feel that the lens is engaging properly he can withdraw the cup, and change his technique to the usual capsulotomy operation with iridectomy.

9. The Barraquer suction extraction is the operation of choice for senile cataracts in old people. Moreover, the patient may be spared years of blindness, as immature cataracts are operable by suction.

DISCUSSION

DR. V. A. CHAPMAN, Milwaukee: I have had occasion to employ the Barraquer method of cataract extraction in some two dozen cases extending over a period of about two years. I was, I believe, the first to use this method in Wisconsin. I described it in a paper which I read before the Milwaukee Academy of Medicine in May, 1923, and which was published in the Wisconsin Medical Journal in September, 1923. The early work with it was done at Milwaukee County Hos-

pital. This method has been uniformly successful in my hands and this in spite of the fact that it has been employed in a rather unusual variety of cataract cases. The specimens here presented show some of the different types of cases in which the Barraquer method has been employed by me.

In addition to these shown I have used it in cases of congenital rudimentary misplaced cataracts in which the lens was very small; and in one case of congenital cataract in a boy 8 years old where the lens was of full size, the most of the lens substance of normal appearance and density, and the disabling opacity confined to the anterior capsule and lens substance immediately in contact with the anterior lens capsule. In this case the anterior capsule of the lens was ruptured on attempted withdrawal of the lens by the suction cup attachment and the soft substance of the lens was aspirated by the suction action. This was thought to be vitreous, but was proven to be lens substance. I believe that the rupture was caused by being too conservative with the globe section. This case went on to uneventful recovery with excellent vision and cosmetic results without the necessity of any secondary operation. This is the only case I have had in which rupture of the capsule occurred.

Only in one case was there any loss of vitreous. In that case there had been old iritis previous to the operation and there were attachments of the iris to the anterior capsule of the cataractous lens. This made it unusually difficult to withdraw the lens in its capsule but it was accomplished with a slight loss of vitreous. This case made an uneventful recovery with excellent vision results.

I have had several cases in which the contents of the lens capsule were fluid and these were removed very readily without iridectomy, without rupture of the capsule containing the opaque fluid lens, without loss of vitreous and with excellent results and no necessity of a secondary operation.

It is in the cases of soft opaque lenses or opaque fluid lenses that this method is particularly advantageous. The unbroken capsule containing the lens substance is lifted out by the suction cup attached to the anterior surface of it, the mass moulding itself readily to passage through the uncut, unutilated, dilated pupil.

The hard fully "ripe" senile cataract lens is the most difficult to remove in this manner. There is less chance to get a good suction attachment to the surface of such a hard lens but it can be done. These fully hardened opaque lenses are the type best adapted to the old combined extraction method, with or without rupture of the



SOME DIFFERENT TYPES OF CATARACTOUS LENSES
Illustrations Nearly Twice the Actual Size of Specimens

No. 1—A soft fully opaque lens such as are often found in diabetic cases.

No. 2—A traumatic cataract in which but little absorption of lens substance had taken place following the injury three years ago.

No. 3—A smooth hard senile cataract of ordinary size, but more spherical in shape than ordinary.

No. 4—A senile cataract of ordinary density, shape, and size.

No. 5—A large cataractous lens in which the entire contents were fluid of milky appearance.

No. 6—A membranous congenital cataract thin at center and thick and tough at periphery, in a child eight years old. This was loose from peripheral attachments, but not misplaced or dislocated.

All of these were removed without rupture of lens capsule and without loss of vitreous, by the Barraquer method of cataract extraction at Milwaukee County Hospital by Dr. V. A. Chapman. Each is entire in the unbroken capsule of the lens. The circle with somewhat of raised area inside of it was caused by the suction cup of the Barraquer instrument where it was attached to the lens for purpose of lifting the lens from its position in the globe.

capsule.

I have not found one case of cataract in any variety in which the Barraquer method has failed, or been unsatisfactory in its application or results. It has been called dangerous; and so it is no doubt. So also are any methods of surgery and many of our most reliable agents for internal, hypodermatic, or intravenous use.

There is little indeed in the professional life of a physician or surgeon that he does for relief of the afflicted that is not dangerous in some way or other.

He must proceed with full knowledge of the danger and act and govern himself accordingly.

The Barraquer method of cataract extraction is not in itself wholly sufficient. It is a very good method and is to be employed when it *should* be employed. I believe that there is no form of cataract in which I cannot em-

ploy it successfully. I can even remove an absolutely normal lens with it. There are certain cases, however, in which I prefer some other method, and I have had several cases in which I have had the Barraquer apparatus all ready for use and decided, after section of the globe was made, upon a different method for removal of the lens. Cataract operations cannot all be done successfully by any one hard and fast rule of thumb method.

In all of the cataract operations that I have done in the past two years I have fashioned a conjunctival flap with sutures inserted before making section of the globe. I am sure that this method has saved many eyes from loss of vitreous and disaster; and is good surgery.

DR. E. E. NEFF, Madison Wis.: Mr. President, regarding the paper of Dr. Higgins, as a member of the New York Eye and Ear Infirmary, on the house staff from 1920 to 1921, it was my pleasure to work in co-operation with Dr. Clyde E. McFanel, who in 1919 modeled a suction apparatus in a sense similar to the one described to you this afternoon in cataract extraction. He was depending on an ordinary extraction apparatus for pressure. Despite the crudeness of his equipment, he had very satisfactory results and was very much elated over that type of procedure for the removal of lenses. Since leaving the infirmary and coming to Wisconsin, I have found he has equipped himself with this same machine and that he is very much delighted with his end results. Personally, I feel the principle is ideal and that sometime all of us who are doing cataract work will certainly use it in selected cases.

DR. C. G. DWIGHT, Madison, Wis.: We should congratulate Dr. Higgins for his fortitude in this process of taking this new step, which is so entirely different from the classical that we all learned and have depended upon. The fact that he uses it with his private patients shows he has a great deal of confidence in it. If he had used it in his general clinical cases, I wouldn't have thought so much in favor of it.

I saw this work by Green Brothers in San Francisco three years ago when they had the honor of remodeling the suction cup that you are using now. They, of course, were very enthusiastic about it, but it was not accepted at all in San Francisco, and they thought it was a fad especially from the Green Brothers who were looked upon as faddists because they used the method. Now when it is coming home as close as it is now, we are all interested. I believe it is very exact. I wish to ask Dr. Higgins if he feels it is any more risky possibly in the premature cataracts than the old classical operation, if we found it necessary. Our method now consists of doing a preliminary iridectomy and then the extraction in the premature cases. I would like to ask whether we will get as good results in that preliminary as you feel you get now from the cup operation without any preliminary, and would you use it after there had been a preliminary performed?

DR. F. A. DAVIS, Madison: I would like to say in connection with Dr. Higgins' paper that I had the privilege of hearing Prof. Barraquer give his paper on this sub-

ject two years ago at the International Congress of Ophthalmology in Washington. He at that time also gave a moving picture demonstration of the operation, several of them in fact. Of course, he is extremely enthusiastic about the work. Personally, I have had no experience in it. In observing this moving picture demonstration, as I have mentioned to Dr. Higgins, it looked like a rather formidable procedure, after grasping the cataract the manner in which he moved the instrument, bending it backward as though he were exerting great pressure on the vitreous. I know that I not only remarked but a number around me remarked how in the world could he escape losing vitreous by such great pressure on the globe.

I feel that Dr. Higgins is to be congratulated in starting this work in our particular vicinity. I think it will encourage more of us to attempt it. It seems to me it might be of particular value in the immature senile cataract which is developing in both eyes but neither of which has arrived at a state of maturity, which would allow of its removal safely by the ordinary method. In other words, if a patient's vision has fallen perhaps twenty-one-hundredths or twenty-two-hundredths, that lens you know from its appearance is not mature and with the ordinary obstruction there would be considerable soft lens matter remaining behind and yet we hate to delay the operation six months or a year, incapacitating the patient all this time and causing anxiety about oncoming blindness. In this particular case, it seems to me, it would be advantageous to try the operation, because with the intracapsule operation there would be no soft lens matter remaining or capsule remaining and it would offer the patient an immediate result, whereas otherwise he might have to wait six months or a year.

CHAIRMAN SMITH: If there is no further discussion, we will call on Dr. Higgins to close his paper.

DR. HIGGINS: I am pleased to see this goodly number of oculists remaining for the special papers. A presentation of the Barraquer suction cataract operation is timely as well as meeting the needs of the long delayed operation on immature cataracts in old people.

Those present who are doing cataract operations will be interested in examining the three suction tips. The tip made by Weiss you see has a smaller cup than Green's model. I found the Weiss and Barraquer cups easier to insert in the eye, and to apply to the lens. An advantage of the Barraquer handle is that some negative pressure may be retained there even when you have directed the pump to be stopped. The valves also permit entire release of suction as well. The small opening on the Green and on the Weiss handle permits control of suction by the finger. Some practice and experience is necessary to become proficient in the suction operation, with this in mind it is evident that those who have opportunities to do but few cataract operations had best confine their efforts to the combined capsulotomy technique.

Replying to Dr. Dwight I feel that I would prefer in a patient of mine with immature cataract to remove the entire lens with the suction technique rather than to

resort to the combined capsulotomy method of extraction.

Answering Dr. Dwight and also Dr. Davis I will say that I have had the experience of attempting the suction removable of a cataract and on finding that the lens was not responding to the grasp of the suction in the cup I abandoned the suction technique and went ahead with the capsulotomy extraction. One of these cases was the traumatic cataract in the young man. If the patient is quite young for senile cataracts, in the fifties, and the cataract is immature in an apparently healthy eye I feel that I should wait. In a young patient where you have reason to believe that the zonula is friable the age need not deter one from operating. There was such a case in the series presented by me today.

Effect of Bone Marrow-Spleen Extract on Relative Blood Cell Volume in Advanced Pulmonary Tuberculosis*

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Satisfactory results have been reported on the symptomatic and hematopoietic effects of combined bone marrow and spleen in treating anemic conditions found in various types of tuberculosis by Leake and Evans¹, Kay², Fisher and Snell³, and Dunham⁴. In this report we have gone a step further by putting this new erythropoietic agent to a more severe test by giving it in far advanced cases, selected according to our method indicated below.

In a previous study, we⁵, again called attention to the fact that there is no consistent blood picture in tuberculosis although it is well known that there is a pathologic physiology of the blood in that disease. Bender and DeWitt⁶ more recently reaffirmed that a review of the literature of studies on the blood in human and experimental tuberculosis shows little unanimity as to the blood changes that occur in this disease. Our study of the relative blood cell volume⁵, however, has shown that tuberculous individuals can be divided into three groups. These groups were designated Class A, with relative blood cell volume above that of normal individuals, Class B, with figures equalling that of healthy men, and Class C, those with figures below normal. Further investigation showed that this grouping when correlated with the clinical status of the cases apparently indicated a constant relation to the condition of the patient.

*Publication approved by Col. B. F. Hayden, Chief Surgeon, N. H. D. V. S. Headquarters, Dayton, Ohio.

Dr. Barraquer does not recommend preliminary iridectomy. I may have an opportunity to observe the effects of this which I shall report later. Dr. Barraquer is as enthusiastic as Colonel Smith. Barraquer uses the suction method routinely. He has reported over a thousand successful operations. From my experience I feel that we should follow Barraquer's instructions in detail, including careful pre-operative examination of the cataractous lens.

The picture that Dr. Davis saw may have been of a lens that, "tumbled." Tumblers occur with Barraquer's intracapsular operation as they do with the Smith intracapsular operation. I think that covers your questions. (Applause.)

Those in Class C are doing poorly, and failing more or less rapidly.

Class C cases recently admitted to the hospital were selected for controls and the administration of bone marrow and spleen extract. The blanket or justification excuse for such general therapy as the use of this extract is the usual one advanced for all diseases for which a specific remedy does not exist. With no direct curative agent for tuberculosis at our command, and with the knowledge that somehow many advanced cases do develop a resistance and resume their usual duties in society, it seems logical to attempt relief by remedying the various untoward symptomatic reactions in the tuberculous individual. It is felt in lieu of a specific remedy that somehow the proper combination of therapeutic factors may be found that are necessary to initiate or produce a cure or partial recovery. In this case an attempt was made to improve the relative blood volume by specific stimulation of blood-forming organs and see if it were not possible to transfer cases from the Class C group to Class B. In other words to transform a hopeless into a hopeful case.

METHOD

The relative blood cell volume was determined by withdrawing two cubic centimeters of actively circulating venous blood and adding it immediately to 0.4 c.c. of 1.6 per cent sodium oxalate solution in a graduated Sahli hemoglobinometer tube. The solution was mixed thoroughly, stoppered with cotton, and centrifugated at high velocity for half

an hour. This determination and the weight were the chief points observed on (a) patients receiving, and (b) patients not receiving spleenmarrow.

A study of the relative blood cell volume on the same individuals for periods up to one and one-half years, and in a large group of normal healthy men have shown the range of error or maximum variation to be no more than 2.0 per cent actual change. The daily maximum weight variation was taken as one pound.

For a month the desiccated spleen and marrow (combined in equal proportions by weight) was administered in 0.3 gram (5 grain) amounts, in capsule form, three times daily, before meals.

REPORT OF CASES

Thirty Class C cases were selected for observation, ten were untreated, and twenty were given the spleenmarrow compound. This number was finally whittled down to five untreated cases and fifteen treated cases on which adequate reports could be made.

Untreated: An analysis shows that one of the cases lost four pounds in weight, while the others gained from 3 to 7 pounds. The relative blood cell volume dropped in one case 2.3 per cent, or actually up to about 6 per cent of the total blood cells, while of the other four only one gained 0.5 per cent. The one case that dropped in the volume determination also lost markedly in weight, and shortly after the completion of this series had exitus.

Treated Cases: Thirteen cases are reported that were followed in detail. Two of the thirteen must be dealt with separately because an analysis of their weight curves shows that they had been gaining steadily before treatment was begun. But a further study shows that the weight increase was quite evidently accelerated during the period of spleenmarrow administration. Case 2 and Case 5 gained ten and eleven pounds and 2.0 and no per cent increase in relative blood cell volume respectively. To attract attention to the biologic significance of these blood values we must revert to the point of percentile values that Prof. Porter emphasized in his 1917 Harvey Lecture on Vasomotor Relations. The blood cell volume change noted above of 2.0 is really an increase not in a total of 100 (equivalent to cells and plasma) but $\frac{4}{10}$ to $\frac{1}{2}$ that (equivalent to all the cells). This is a real change and the percentile value is then recorded as an increase of 4 to 5 per cent.

Of the remaining eleven cases, five showed a total gain of ten pounds, four lost a total of 6.0 pounds, and two neither gained nor lost. Three of the five controls gained a total of 12 pounds and two lost more than 5 pounds. These figures seem to show no change for the better in the treated cases as far as weight is concerned, but the blood volume picture is entirely different.

Not a single one of the controls showed an increase in the blood volume, while one of them showed a marked loss. Not one of the treated cases had a marked drop in blood volume. Five showed no change at all, and five had marked increases of 1.4 to 3.3 per cent actually, or 3 to 8 percentile values after deduction of the average maximum variation. There is, therefore, no doubt that many active far advanced cases of pulmonary tuberculosis can be benefited by spleenmarrow administration. This can occur in three ways. If they have shown a loss, or if they have been at a relatively stationary level they may be started toward improvement. If they have already started to improve it seems as if the treatment accelerated the improvement.

SUMMARY

The reaction was more striking in the relative blood cell volume than in the weight curves. Four of the cases that were originally in Group C were raised to Group B for whom the prognosis is much more satisfactory. Spleenmarrow betters the blood picture in more than fifty per cent of the far advanced active cases of pulmonary tuberculosis.

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MAY DISPENSE

Four members of the Society in a clinic, not incorporated, inquired if one of them might dispense such pharmaceuticals as were necessary for their own patients. The members were informed that this might be done under the present law, no change having been made by the last legislature.

Recent Advances in Anesthesia*

BY ANNE FITZGERALD

Madison

During the past decade anesthesia, both local and general, has attracted the attention of many research workers. New agents for use in local and general anesthesia have been developed as have also improved apparatuses for their use.

Luckhardt and Carter¹ presented ethylene to the medical profession in 1923 as an anesthetic which possessed qualities and advantages not possessed by any other anesthetic agent. It is generally conceded by Leake,² Gwathney,³ Sise⁴ and others that ethylene is a more powerful anesthetic than nitrous oxide, though Sise has found that the relaxation which is induced by ethylene, cannot be compared to that induced by ether. These writers agree that a larger proportion of oxygen may be given with ethylene than with nitrous oxide. This circumstance lessens the anoxemia, thereby increasing the relaxation and also enhancing the safety of the anesthetic. Leake and Hertzman⁵ found that the effects of ethylene-oxygen anesthesia on the blood reaction depended largely on the degree of anoxemia. If no anoxemia was present both the hydrogen ion concentration and carbon dioxide content tended to fall slightly, but not beyond normal limits, after forty minutes anesthesia.

Recent developments have shown that ethylene is much more explosive than was at first reported. For this reason it has been discontinued in a number of institutions. Sise states that all possible sources of ignition such as cautery, x-ray, ventilating fans and electrical currents particularly of high amperage should be avoided. He recommends the grounding of the gas apparatus, operating table and anesthetist together. The grounding of the gas machine alone to the radiators is not always effective. Experimental work is now being pursued to prevent explosions from static electricity. Unless these experiments are successful, the usefulness of ethylene is somewhat limited.

The recent work of Weiland⁶ has demonstrated certain advantages of acetylene over ethylene. According to Weiland acetylene brings about anesthesia even in the presence of a high percentage of oxygen (40 per cent). Analgesia is said to

be maintained in the presence of 80 per cent oxygen. The effect of acetylene on the blood is much the same as that of ethylene. Leake⁷ states that the anesthesia under acetylene-oxygen seems variable. The disadvantages of acetylene are the same as those of ethylene, inflammability, explosiveness and odor.

Brown⁸ has reported a series of general anesthetics induced by propylene. Anesthesia may be induced with concentration varying from 50 to 37 per cent propylene in oxygen or in air. Maintenance is carried on with concentration of 31 to 20 per cent propylene without any signs of poisoning. The subject desaturates quickly and quietly. No marked change was noted in the blood pressures.

In 1913 Connell⁹ described an apparatus (anesthetometer) for delivering an accurate percentage of ether vapor. Connell showed that the vapor tension of ether required by man is constant after saturation. The saturation time depending on the respiratory volume and circulation rate. This was later confirmed by Boothby¹⁰. The percentage, by volume, required for even ether narcosis was given as 3.24 to 3.70. Connell's anesthetometer has given splendid satisfaction especially in anesthesia for brain surgery and during long operations in which there is considerable operative shock and where it is absolutely necessary to minimize the dangers of ether anesthesia.

During the world war a simple form of positive pressure anesthesia or analgesia was developed by Gwathney¹¹ for chest surgery. By varying the pressure of the gases the wounded lung could be moved into position for operation without undue traction. This assured post-operative comfort for the patient by allowing an air tight closure, preventing pneumothorax. The mixture of nitrous oxide and oxygen used was one hole of oxygen to three holes of nitrous oxide (from 15 to 35 per cent oxygen) using the Gwathney war model gas apparatus. With the McKesson apparatus (which has a fine adjustment for the measuring of gases) we have used a 60 per cent oxygen to a 40 per cent nitrous oxide (always under pressure) for chest work. The analgesia produced with this mixture was entirely satisfactory for both surgeon

*From The State of Wisconsin General Hospital, Madison, Wisconsin.

and patient. These patients received a preliminary dose of morphine according to the Gwathney technic.

THE BAD RISK PATIENT

According to Crile¹² the inhalation and anesthetic of choice for the bad risk patient is nitrous oxide but for some patients local anesthesia or a combination of both may be preferred. Crile maintains that "No amount of trauma upon a part which is physiologically severed from the brain by means of spinal or local, or regional anesthesia, can produce any alteration in the brain cells. On the other hand unless the patient can be protected from the sights and sounds which accompany a surgical operation the local or spinal anesthetic does not protect the patient from psychic trauma." Crile has demonstrated changes in the brain, liver and adrenals following ether anesthesia but found a normal appearance of the brain cells following nitrous oxide narcosis, even after shock-producing trauma.

That preliminary medication by morphine is a preventive to post-operative shock is borne out by many workers. Gwathney states that "not only is the patient in a frame of mind to receive suggestions but it is possible to lighten the anesthesia without disturbing the surgeon. The kidneys and lungs have been saved unnecessary irritation by thus reducing the amount of anesthetic by one-third to one-half." Crile¹³ has found that morphine should be given rather before than after anesthesia. "When the hydrogen ion concentration of an animal has been increased even by emotion, exertion or anesthesia and the animal is then morphinized it was found that the blood did not return to its normal alkalinity, that is the body had lost its power to neutralize acidity." McKesson¹⁴ finds that morphine will reduce the metabolism and may prevent over ventilation and washing out of the normal carbon dioxide. The need for rebreathing is thereby eliminated.

On the other hand Leake and Koehler¹⁵ have shown that "morphine causes a marked rise in the ketone bodies of the blood enough in fact to lead to a transitory alkali deficit presumably by neutralization." It is the opinion of Stehle and Bourne¹⁵ that the acidosis following ether anesthesia is caused by phosphoric acid leaving the muscles unaccompanied by base. The acid enters the circulation and combines with the available alkali in the blood, thus lowering the alkali re-

serve. It is believed that these phosphates are stored in the liver until kidney function is restored when they are eliminated in the urine. These authors find that the preliminary dosage of morphine produces a marked excretion of phosphorus as soon as etherization is begun. This is attributed to the action of morphine upon the liver which renders it incapable of retaining phosphorus.

For some years Henderson¹⁶ has advocated the use of carbon dioxide to de-etherize patients as well as to aid in the resuscitation of individuals after carbon monoxide and methyl alcohol poisoning. In a recent series of articles Haggard¹⁷ has described the use of carbon dioxide in the etherization and de-etherization of animals. Haggard has found that the inhalation of a diluted mixture of carbon dioxide will greatly shorten the induction period, without increasing the concentration of ether much above the normal anesthetic tension (3.7 to 4.0 per cent in an atmosphere, according to Haggard). A mixture of 5 to 10 per cent of carbon dioxide in air or oxygen will increase the respiration rate about five times. Haggard feels that the rapid induction of anesthesia is desirable for the reason that "the prolongation of the sub-anesthetic stages is detrimental to the subject," that "the inhalation of a high concentration of ether (to aid induction) results in even more than proportionately great pulmonary irritation." Haggard has shown that ether is not destroyed or utilized by the body. It is all excreted unchanged and approximately 90 per cent of the ether absorbed can be recovered in the expired air after the cessation of the administration. The rate at which ether is absorbed or eliminated varies nearly, but not quite in exact proportion to the volume of air breathed.

Boothby and Cotton¹⁸ state that "the aim of the anesthetist is to keep the carbon dioxide content of the blood as near normal as possible. Therefore one should take care to maintain one's volume of air or combined gases so that the patient breathes in a practically normal manner."

ANESTHETIC SHOCK

One of the largest factors in the recognition of approaching anesthetic shock has been the accurate plotting of blood pressure charts during anesthesia. In 1915 Boothby¹⁹ pointed out that the patient was in danger when the pulse pressure dropped to 15 mm. of mercury. He also showed

that it was possible to warn the surgeon at least fifteen minutes before any grave crisis from operative shock or ordinary hemorrhage occurred. Cannon²⁰ in his observations on the wounded found that a systolic pressure of 80 mm. of mercury for one hour resulted in no diminution of the alkali reserve. "On the other hand, the reduction of the pressure to 70, 60 or 50 mm. will cause, at the end of one-half hour, a marked reduction in the reserve alkali varying directly with the degree of lowering of the blood pressures. There seems to be consequently a critical level in the blood pressure below which it may not fall without bringing about changes in the blood itself." The value of blood pressure observation on patients subjected to general anesthesia is shown by the increasing number of hospitals which make a routine practice of plotting blood pressure charts during operation.

One of the recent additions to the treatment of post-operative vomiting has been the insulin treatment of Thalhimer²¹. Thalhimer has found by giving insulin with glucose to patients suffering with post-operative vomiting and acidosis where the urine was loaded with diacetic acid and acetone the recovery was almost immediate.

SUMMARY

Ethylene and acetylene are dangerous from their—*æþ pœsn æq of ƒou ære pœr sætræþœrd ælæisœþæ*—erally as anesthetics without unusual precaution.

Nitrous oxide with preliminary use of mor-

phine and combined anesthesia seem to be the anesthetics of choice for the bad risk patient.

The accurate plotting of blood pressure charts during operation is an invaluable aid in the early recognition of approaching shock.

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Local Anesthesia of the Abdomen*

BY L. W. HIPKE, M.D.

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The aim of modern surgery in the last few decades has been to decrease operative mortality and morbidity. This has been done in various ways, the two most important factors in gaining this end being, surgical technique, and anesthesia. The latter may be divided into two main groups,—general narcosis and,—local anesthesia.

Modern work in local anesthesia dates from 1853 when Alexander Wood in Edinburgh discovered the hollow hypodermic needle. He appreciated the fact that it was a great aid for local anesthesia work, and first tried the effects of injections of morphine and opium.

But all work on local anesthesia was eclipsed by the advent of inhalation anesthesia. And after people became accustomed to the idea of losing consciousness to undergo an operation, they demanded to be operated without pain.

And even the discovery of cocain in 1884 did not make local anesthesia more popular. But in 1892 Shleich published his first paper on the conduction method with a .01% cocaine solution, and after this the method was given a wide trial, and fatalities began to be reported because of the toxicity of cocaine, which again gave local anesthesia only a minor roll. Then in 1905 Einhorn formulated the less toxic derivative known as novocain, and this was first used by Braun at Zwickau in Germany, and from that time on it

*Read before the staff meeting of the Milwaukee Maternity Hospital, April 7, 1925.

has been used in ever increasing number of surgical conditions.

Of course, this type of anesthesia was first used on the extremities, as the abdomen has some special problems for local, or conduction anesthesia. The indications and contra-indications for this type of anesthesia in the abdomen are dependent on so many factors, that they are necessarily elastic. For instance, in Europe where the administration of general anesthesia is far less developed than here, the indications for local are of course more numerous. It is absolutely contra-indicated only where the technical difficulties involved in securing it are insuperable. As to relative contra-indications, marked obesity, childhood, and lack of confidence of the patient in the surgeon are the most important although it must be remembered that inflamed tissues are more difficult to anesthetise than normal. On the other hand the most marked indications for local anesthesia are: (1) Lung and heart affections, (2) extreme toxicity (i. e., eclampsia), or shock, (3) general debility.

METHODS

As to the method of going through the skin, and structures up to the peritoneum, there are no special problems in the abdomen. The desensitization of the abdominal walls may be carried out in three different ways: 1. By direct infiltration, which is the method of choice in many of our clinics. 2. The paravertebral method, which is both too difficult, and too dangerous, ever to become popular, and 3, the infiltration block method which aims to block the various sensory fibers supplying the operative field. This latter is the method I have had most experience with, and it has the advantage that one does not infiltrate the line of incision and therefore anatomical structures appear normal and not edematous as they do with the direct infiltration method. For instance in a mid line incision for stomach operations it is necessary to inject your solution along the costal margin of either side, blocking the nerves as they emerge from the intercostal spaces, and then block off a rhombus with the umbilicus the lower point, and the ensiform the upper. Then before opening the peritoneum this should be infiltrated. The opening of the peritoneal cavity with any method is relatively simple, but the desensitization of the abdominal organs has not been so easy. Len-

ander was the first to investigate the intricate sensory apparatus of the abdominal organs. He concluded that the sympathetic nervous system did not convey any sensory impulses, and that all organs which were innervated by the vagus, below the origin of the recurrent or by the sympathetic were not sensitive to pain, pressure, cold, or heat. The pains were due to stretching and pulling on the mesentery which cause irritation of the intercostal nerves of the C. N. S. which innervate the parietal peritoneum of the posterior abdominal wall.

But this did not agree with the experiences of many clinical investigators, and somewhat later Kappis concluded, that abdominal organs have practically no sensation for the reason that, either the nerve fibers disappear before reaching the organ, or the fibers which reach the organs are too fine and too few in number. However, these regions to which the splanchnic nerve fibers penetrate in sufficient number and calibre are strongly sensitive. These regions are the mesentery, the lesser omentum, the attachment of the large omentum to the stomach, region of the common bile duct, cystic duct, hepatic duct, and hylus of liver, the hylus of the kidney and neighborhood of large vessels. The irritation travels by way of the abdominal ganglia through the splanchnics, rami communicantes and all branches of sympathetic. On the basis of this latter work of Kappis various attempts were made to interrupt the sympathetic nervous system as it courses cephalically through its ganglia on either side of the vertebral bodies in close proximity to the abdominal aorta.

Kappis did it from behind and the technique is as follows: The patient sits with the upper part of the body bent forward. Seven cms. outward from the middle line a twelve cm. long needle is introduced against the lower border of the twelfth rib, then the needle is placed at an angle of 30-45° with the sagittal plane of the body. At the same time the outer end of the needle is slightly lowered and advanced toward mid line until it meets the bony resistance of the twelfth thoracic vertebral body. Here the needle is manipulated so that it just grazes the vertebral body, and the point of the needle is just anterior to the body of the vertebra, this being the situation where the splanchnic major and minor nerves lie in the retroperitoneal tissue. Now one must be absolutely convinced that the needle point is not

in a vein or in the subarachnoid space by aspirating, and if not inject 20-30 C.C. of 1/2% novocain slowly, and then repeat the same procedure on the opposite side.

There have been fatalities reported by this method and they are due to one of two reasons as indicated, either the solution was injected into the subarachnoid space or into a vein.

The Braun method is superior to this because it is done with the abdomen open, and the needle can be successfully guided with the finger between the inferior vena cava and the abdominal aorta in reaching the retroperitoneal space in the region of the twelfth dorsal vertebra.

The Wendling method hardly deserves mention because of its danger, the needle being inserted directly through the abdominal wall and the liver to the retroperitoneal space.

And to be complete, we must mention the method of Farr. He floods the hepatico—duodenal fossa, and he does this under observation of the eye, but as he says the conditions must be ideal. Perfect anesthesia with its resultant perfect relaxation of the abdominal wall, presence of a psychanesthetist, an incision of appropriate length and direction, elastic retraction, perfect illumination, reversed Trendelenburg position, and cooperation of the patient, followed by the successive exclusion from the field that is to be anesthetized of the pyloric antrum, the duodenum, the colon, the round ligament of liver, and finally the liver edge which may be elevated gently.

And the above are the various methods of "Splanchnic anesthesia" which have made it possible to really do a laparotomy under analgesic conditions. As suggested previously novocain is the best solution to use, because of its low toxicity and high anesthetic value. There are other derivatives used, as stovain, tropococain, urea hydrochloride tutocain and a host of others. The latter is very popular through central Europe at present, many observers there being very enthusiastic about its use, as it is supposed to be 1/4 as toxic as novocain. However, Copeland reported in the British Medical Journal that novocain was far the best medium to use in subcutaneous injections, at the same time reporting the effect of tutocain on rabbits where it was proved to be inferior to novocain. He also concluded that "besides cocain, it is believed that the properties of butyn and tutocain may render them addiction drugs."

As far as I could judge tutocain did not seem to have the anesthetic effect that novocain has.

For general use, a 1/2% solution of novocain is most satisfactory, but inasmuch as novocain is a poison a very exact dosage corresponding to the strength and weight of the patient is essential. In severe exsanguinato and cachectic patients, a 1/4% solution should be used.

Amongst the outstanding advantages of local over general anesthesia in abdominal surgery, are that post-operative shock is met with less frequently and more time may be spent in the performance of the operation, without added risk. And this latter is an essential factor in those operations which by their very nature, consume time, as for example a resection of the stomach. Finsterer, of Vienna, in his resections, anastomoses in three layers of interrupted sutures. The time required by this method would probably prove fatal to the patient, if any other than local anesthesia were used. But with local the time spent in this method of suturing proves to be of a decided advantage to the patient, and to my mind is the chief reason for Finsterer's low mortality rate in stomach resections.

He is always certain about his line of suture as was proven one day when he washed out the stomach of a patient on whom he had performed a resection earlier in the day.

In conclusion, I believe that local anesthesia should be used more frequently than it now is, especially in the more serious operations, because of its benefits to the patient.

ABDOMINAL SURGERY IN DIABETES

D. P. Jones, L. S. McKittrick and H. F. Root, Boston (Journal A. M. A., September 12, 1925), are of the opinion that the only additional consideration in deliberate operations on diabetic patients other than would be considered in normal persons is the ability to control the diabetes before operation. In infections, acute and chronic, it is much more important to operate early than in the case of normal persons, and in acute cases the operation is more of an emergency than in the normal. They must be treated as emergency cases because of the difficulty of determining the seriousness of the lesion, and because acute infections quickly lead to serious diabetic conditions. The rule should be to operate first, and at once, in acute infection and treat the diabetes after the operation.

DOES ROENTGEN RAY MODIFY THE COURSE OF WHOOPING COUGH?

H. K. Faber and H. P. Struble, San Francisco (Journal A. M. A., September 12, 1925), report the results of a study based on equal numbers of control and test cases selected in such a manner as to afford if possible a just comparison between those treated and those not treated with the roentgen ray, and the remaining twenty-two were treated with antipyrin. Selection was made by alteration. The patients who did not receive roentgen-ray treatment made a better showing in practically all respects. The authors believe their figures afford strong evidence against the assumption that the roentgen ray has a curative or even beneficial physical effect in the treatment of whooping cough.

Headaches from the Systemic and Cranial Standpoint*

BY ROBERT SONNENSCHN, M.D.

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It is very difficult to say anything new with reference to this subject, but we will endeavor to summarize as far as possible that common and distressing symptom of headache. The sensation we call headache is probably due to some irritation or affection of the fifth cranial nerve (trigeminus), either by contact or pressure directly along its fibers, by way of the circulation, or even by communication with other nerves such as the sympathetic. The pressure may be caused by tumors, abscesses, nasal abnormalities, etc. The toxemia results from focal infections in various places. Syphilis may also affect this nerve. Then we may have the reflex previously mentioned from the other cranial nerves. During this process there is usually some irritation of the dura (supplied by the fifth nerve). Increased or diminished intracranial pressure has much to do with causing headaches.

In order to institute the proper treatment an accurate diagnosis is essential. One of the most important factors in arriving at a diagnosis is the matter of etiology. In searching for the cause of headaches, all parts of the body must be kept in mind. It is well to remember, however, that headache is only a symptom of some process, but it is not the disease itself.

One of the tendencies in the practice of medicine is to treat symptoms, and not directly the lesion of which the symptoms are merely an index. Thus, the pain of so-called rheumatism was formerly alleviated by the use of salicylates and other sedatives; now we know that at least some of these cases are due to focal infections arising from the teeth, tonsils, nasal accessory sinuses, etc. Again the dyspnea of asthma has often been treated with certain drugs, when we know that renal, cardiac, or nasal conditions may lie at the root of the disease, or that it is an expression of an anaphylaxis due to the entrance into the system of certain foreign proteids. No affection, however, is perhaps more variable in its etiology, more annoying to the patient, and more often treated symptomatically, than is headache. In some form or

other, and in varying degree, a great majority of all people seem to suffer occasionally from this symptom. There is a tendency on the part of many specialists to assign to the group of organs they are accustomed to treat, any symptoms which the patient presents. Has it not often occurred in gastric crises that they have had the stomach tube passed and lavage carried out when a tabes was the actual condition present and not an ordinary gastric disturbance? It likewise behooves the rhinologist to remember that all headaches do not arise in some nasal condition, but may be due to syphilis, high blood pressure, etc. In other words, a knowledge of the correlation of the various parts of the body is essential.

TWO GENERAL GROUPS

There are probably two great groups into which headaches may be placed, namely:

I. Those due to general or systemic conditions outside of the head. Under this classification we then have:

1. Anemia.
2. Pelvic disturbances.
3. Gastro-intestinal conditions.
4. Renal involvements. (Nephritis with high blood pressure, uremia, etc.)
5. Cardiac lesions producing either a cerebral anemia or passive congestion.
6. Abnormally high or low blood pressure.
7. Neurasthenia.
8. Syphilis.

II. Conditions arising within the head.

1. Trifacial neuralgia.
2. Meckel's ganglion neuralgia.
3. Dental apical disease or unerupted or impacted molars.
4. Migraine.
5. Myositis (occipital, causing "indurative" headache).
6. Brain lesions, such as abscess or tumor.
7. Involvement of the ear. (Otitis media or otitis externa.)
8. Eye conditions such as eye strain or abscesses, etc.
9. Nasal conditions.
 - a. Suppurative processes, such as acute or chronic sinusitis.

*Read before Central Wisconsin Ophthalmological and Oto-Laryngological Society at Eau Claire, Wis., May 19, 1925.

b. Nonsuppurative conditions producing:

1. Hyperplastic sinusitis.
2. Vacuum effect.
3. Pressure effect.

The differential diagnosis requires an examination in many cases of various or almost all parts of the body.

We will now consider briefly each one of these types of cases.

I. SYSTEMIC CONDITIONS

1. *Anemia.* Anemia often gives a rather diffuse pain, at times of throbbing character, and there is also a feeling of weakness, fainting, etc. The headaches are often relieved by rest, change in diet, iron and arsenic, a good vacation, etc. An examination of the blood will make the diagnosis. The course of the condition, as well as a check on the effect of treatment, is made by repeated blood counts and smears.

2. *Pelvic derangements of women* may produce headaches which are often in the vertex, or, as the patient describes it, "in the top of the head," but they may also involve the parietal region. The pain is often felt as an intense fullness or pressure. Where pelvic pathology is suspected, a careful local examination by the practitioner or gynecologist is indicated, rather than as so often seen, repeated attempts to cure by nasal manipulation alone, a condition remote from the head. In some cases of dysmenorrhea, however, great relief may be afforded the patient by treatment of certain parts of the nose.

Fliess showed years ago that the abdominal and lumbar pains present in many women during menstruation may be partly or wholly relieved by cocainization of the anterior tip of the inferior turbinate and of the tuberculum septi. This latter structure is, as you know, the thickening at the upper third of the nasal septum which contains some glandular elements and many blood vessels. The application of cocaine (in 5 to 10 per cent dilution) often gives relief from distress for periods of from six to eighteen hours. Between the menstrual times, cauterization of the sensitive areas with trichloroacetic acid or with the galvano-cautery will, in many instances, diminish the pain at the next menstruation or for several months thereafter. In some cases, this procedure, if repeated several times, will for long periods prevent dysmenorrhea. It must be remembered,

however, that many women will not respond to this line of treatment. If there are mechanical or other pelvic abnormalities such as a marked ante-flexion of the uterus present, these must receive attention on the part of the gynecologist.

3. *Gastro-intestinal* causes of headaches are usually either constipation or some digestive disturbance. Among women, and especially those of foreign birth, chronic constipation is often seen. The headaches are frequently of a dull diffuse character and not localized in any particular region.

In *renal complications*, such as acute nephritis or the chronic interstitial variety with high blood pressure or with uremia, the headaches are often very severe; they may be especially occipital in character, or may be more pronounced in other portions of the head. Recently we saw a young girl of 15 with an acute otitis media of the hemolytic streptococcus type, who developed intense occipital headaches which were at first assumed to be due to the aural infection, when most abruptly an acute nephritis with complete anuria, high blood pressure and uremic convulsions developed. With appropriate treatment on the part of the consulting internist, the nephritic condition subsided, and later the suppurative otitis media also disappeared without the necessity of a mastoid operation.

5. *Cardiac lesions* may be the cause of headaches in that there is an anemia of the brain with a marked aortic stenosis, or a passive congestion if a decided tricuspid regurgitation is present. These headaches are rather diffuse and not definitely localized; with aortic regurgitation the pain is often of a throbbing character.

6. *High blood pressure*, with or without arterio-sclerosis, is a very frequent cause of headache. In these days of strenuous activity many business men have increased tension. The pains are not referred to any special portion of the head, but often produce a feeling of great pressure within the skull. It is needless to say that the proper treatment of the headache is that directed toward lowering the pressure by proper diet, rest, and abstinence from violent exercise, alcohol, the excessive use of tobacco, etc. Abnormally low pressure, due to exhaustion, hypothyroidism, etc., frequently produces headache. The treatment consists in the use of proper food, haemetinics if necessary, and thyroid extract, etc.

7. *Neurasthenia*. This is a headache which is not so much an actual pain as it is often a feeling of pressure or constriction about the head. As a rule there is some mental or emotional factor present, but this is often difficult to elicit. The patient may state that the pain has been present for many months or even years yet it does not disturb his sleep. If insomnia is present, it is usually due to some other cause. Services of a neurologist may be necessary for the proper diagnosis and treatment of this very annoying though not dangerous condition.

8. *Syphilis or lues* (which term we often prefer as it conveys less idea of stigma to the mind of the laity) in its various stages is a frequent cause of headache. While it is usually held that luetic pains, especially headache, are worse at night, we have found many exceptions to this rule for numerous patients suffer as much or even more during the day than they do at night. Usually the pains are intermittent, lasting only for a few hours at a time and are not definitely restricted to any part of the head. At other times, if a gumma of the brain is present, the symptoms will be like those of brain tumor, the pains are intense, often continuous for days or weeks with focal signs or symptoms, depending on the cranial motor or sensory nerves which may be involved. Examination of both blood and spinal fluid with the Wassermann test must be made if any suspicion of lues is present or if other etiological factors have been excluded. The blood Wassermann is routinely done by many clinicians: if it proves other similar preparation is given intravenously and the Wassermann repeated after a few days, or the spinal fluid is examined. The treatment should, of course, be an intense antiluetic one with mercuric and arsenic preparations, together with potassium iodide in the tertiary stage.

II. HEAD CONDITIONS

1. *Trifacial neuralgia* is characterized by the occurrence of sharp stabbing pains which are short in duration (from ten to thirty seconds), and which are usually excited or aggravated by washing the face, brushing the teeth, talking, etc. Anything which in the slightest degree irritates the face, mouth, or lower part of the head brings on these paroxysms. If a patient claims that his pains last for hours at a stretch, one can usually

at once exclude the presence of a trifacial neuralgia, since it, as before stated, is accompanied by very sharp pain of *very short* duration.

2. *Neuralgia* arising from Meekel's or the sphenopalatine ganglion is a very distressing form of headache. It causes a very severe pain radiating from the root of the nose, in or about the eyes, over the frontal region, back to the parietal bone and then posteriorly to the ear, mastoid process and sometimes down into the neck pharynx, arms, and even the fingers. Not all of these areas are involved in each patient, but either one or several of them may be affected. As a rule, the point of greatest tenderness is about one centimeter behind the mastoid process.

Cocainization of the area behind the posterior tip of the middle turbinate; i. e., in the region of the sphenomaxillary fossa, usually gives temporary relief. To produce more lasting freedom from pain, the application of formalin in dilution of one-half of one per cent or less, in the region of the ganglion is usually quite efficacious. When these local measures fail, the injection of two per cent solution of carbolic acid in 85 per cent alcohol into the ganglion, as suggested by Sluder, gives considerable relief in many cases. Recurrence of the pain is often seen, so that the injections must be repeated. There are certain dangers connected with injection into the region of the ganglion, such as severe hemorrhage, loss of corneal sensation followed by ulceration, etc., so that this procedure should not be lightly undertaken. In some cases, however, it seems to be the only thing which will give at least temporary relief to the agonized patient.

3. *Dental disease, or malformation*, will frequently cause headaches either because of caries at the apices, or because of the impaction or uneruption of the molars, especially of the last ones. We have seen cases in which pains radiated to the eye, vertex or occiput, entirely relieved by extraction of impacted third molars after the patients had been suspected of having accessory sinus disease, and had been treated without avail by means of irrigations, etc. Many of these cases visit a number of doctors before the source of the trouble is discovered. In these cases of indefinite pain, we should have a good X-ray film made of all the teeth which may disclose the pathology present. Often a condition producing irritation

along one small portion of the many branches and subdivisions of the fifth cranial nerve may cause pains in different parts of the head by reflection along the various pathways of this great sensory nerve. We should, therefore, look carefully into the mouth and throat, as well as the nose, for the possible source of a headache; in some cases transillumination or better still, the X-ray picture as before said may be of great assistance. Pains felt in the ears are frequently due to conditions in the teeth, pharynx or larynx without any tangible aural findings. In the same manner, headaches may be present in the form of a referred pain.

4. *Migraine* is one of the most distressing of all the forms of headaches. It is probably a neurosis, the etiology of which is not definitely known, but heredity is an important factor in the condition and we often see its recurrence in several generations of one family. The pain is a very severe one and may be unilateral or bilateral (despite the name of hemicrania so often applied to it), is not definitely localized, and is most frequently frontal or temporal but may be either parietal or occipital. Ocular symptoms such as scintillating or obscuring scotoma sometimes precede the attack, and gastric disturbances such as nausea or vomiting may also accompany it. Whether the condition is due to a change in the choroid plexus, or to a blocking of the foramen of Monroe, is not definitely known.

5. *Myositis*, with the so-called "indurative" headache, is usually characterized by pain in the occipital or suboccipital region, but at times one or both temporal regions may also be involved. The pains are apt to change with the weather, and the condition may be chronic or subacute in its duration, and is usually accompanied by tenderness or pressure over the part affected, such as the insertion of the occipito-frontalis and trapezius muscles, or the transverse process of the fourth cervical vertebra. Movements of the head and neck are usually painful. To relieve this pain, elimination of foci (such as infected tonsils or teeth), if present, is indicated, together with massage and the application of heat.

6. *Brain abscesses or tumors*. These usually show some history of gradual development. Brain abscesses, if located in the temporosphenoidal lobe, are usually preceded by a middle ear infection. When the abscess is in the frontal lobe,

there is sometimes the history of a previous frontal sinus involvement. In both brain tumor or abscess the pain as well as the focal signs will depend upon the location of the lesion. When silent areas, such as the frontal lobes, are involved, often no sensory or motor disturbances will be noted. But if the Rolandic area is involved, paresis or paralysis of the opposite side of the body will be seen; if the left temporosphenoidal lobe is affected in a right-handed individual, speech will be disturbed or lost. Sometimes it is very difficult to localize brain lesions, because so few focal symptoms may be present. The aid of the neurologist is often needed in order to make the diagnosis, and to advise the proper treatment.

7. *Ear conditions* usually produce a pain referred either to the ear itself, the mastoid process or the temporal region. In these cases, of course, we have the various signs and symptoms attending an acute inflammatory process of the external or middle ear. In an external otitis there is usually tenderness over the tragus, pain on moving the auricle, and pain on pressing along the floor of the meatus. In an acute otitis media, if there is involvement of the mastoid cells, certain points of tenderness over the antrum, at the tip of the mastoid and posteriorly near the emissary vein are usually found. It should be remembered as previously stated, that we sometimes have pain referred to the ear from the teeth, tonsils or larynx.

8. *Eye conditions*, such as errors of refraction, eye strain or muscle imbalance, often cause headaches. The pain, which is usually present in or about the eyes or in the temporal region, is increased by the use of the eyes and relieved by proper glasses and muscular exercises. In orbital abscesses, pains in or about the eye, with marked swelling, redness, proptosis and marked tenderness are usually present.

9. *Nasal conditions*. This great group divides itself into two classes of cases; first, the suppurative, and secondly, the nonsuppurative conditions.

The *suppurative form* comprises by far the majority and consists of acute and chronic accessory sinusitis. Only the most fundamental facts can be given here, as the subject of infections of the nasal sinuses is so extensive, that a whole evening's discussion could not begin to cover it adequately. In making the diagnosis, transillumination of the maxillary and frontal sinuses is often of consider-

able value, but it does not give much information regarding the other accessory cavities. Better than this is the use of the X-ray pictures, but most important is the history of the case and the finding of pus on examination, either with or without the use of suction after shrinking the mucosa with cocaine or suprarenalin. Pus coming from the middle meatus arises from one or more cells of the anterior group of sinuses; namely, the frontal, the anterior ethmoidal cells or the maxillary sinuses; pus in the superior meatus or in the sphenoethmoidal recess comes from one or the other of the posterior set of cells; namely, the posterior ethmoidal cells or the sphenoid sinus.

Hajek has said: "The most definite thing about the pains in sinusitis is the uncertain localization thereof." There is no characteristic reference of the pain or tenderness in involvement of any particular sinus, but generally speaking, it is quite true that with maxillary sinus disease, the pain is usually in the cheek, the upper teeth or the floor of the orbit; with frontal sinusitis it is in the forehead; with anterior ethmoiditis, between the eyes and in the temporal or parietal region; and with posterior ethmoiditis and sphenoiditis in the occipital region. But all manners of variations from this statement may occur, such as occipital pains with frontal sinusitis, vice versa, etc. The pain occurs with considerable periodicity at certain times of the day, and then may, after hours, entirely disappear to recur again the next day or after several days, weeks or even months. Particularly with frontal sinusitis do we often find that a patient awakes feeling well, begins to observe pain later in the morning, which increases in severity towards noon or early afternoon and then again subsides, so that by evening there is a complete absence of pain. The individual sleeps well, and awakes feeling fine, only to repeat the cycle. The cause for this peculiar periodicity has never been explained. It is important to remember that a slight leucocytosis and a moderate rise in temperature often accompanies the acute or chronic sinusitis. There is usually tenderness on pressure or percussion, but this is not definitely localized in all cases for the particular sinus involved.

This paper deals primarily with symptoms so that we only mention the fundamental points of the therapy. In an acute sinusitis, rest, application of astringents to the nasal meati, suction,

irrigation of the sinuses, application of heat, and the occasional use of sedatives, if pain is very severe, are the measures usually employed. In the chronic form, cleansing irrigation, suction and operative procedure are indicated, the latter to be as conservative of tissues as possible, consistent with the establishment of proper and sufficient drainage.

The *nonsuppurative* conditions producing headaches comprise two groups; the first is the so-called hyperplastic ethmoiditis and sphenoiditis and the second one, that which I would like to term the "mechanical" form. In the hyperplastic variety, there is usually a thickening of the ethmoidal or sphenoidal mucosa or even a polypoidal degeneration thereof. The headaches are those described under the suppurative variety, but there is, of course, no pus, leucocytosis or fever.

MECHANICAL TYPE

Of the mechanical type there are two forms; first (a), the so-called vacuum headaches, and secondly (b), the pressure headaches.

(a) *Vacuum headache* was described by Ewing and Sluder some years ago. In this condition, headaches occurred which were formerly ascribed to some trouble with the eyes; but, in reality, were due to nasal disturbances accompanied by ocular symptoms. Either because of an unusual approximation of the uncinat process to the bulla ethmoidalis, or of the middle turbinate to both these structures, the infundibulum is practically closed, especially when any inflammatory swelling of the mucosa is present. There is, then, a diminution of the air pressure within the frontal sinus and we get the so-called "vacuum headache." This is usually a constant pain with varying negative, either a provocative dose of salvarsan or exacerbations, usually worse in the morning and also causing inability to use the eyes for any close work; in fact, the use of the eyes often increases the distress. Sometimes there is actual pain on moving the eyes from side to side or up and down. Characteristic of this form of headache is the great tenderness found on pressure against the inner and upper wall of the orbit; that is, the orbital plate of the frontal bone in its nasal half, especially in the region of the pulley of the superior oblique muscle. This point is the thinnest portion of the floor of the frontal sinus and it is usually exquisitely tender to pressure.

Relief may often be afforded merely by the use

of astringents in the middle meatus; in other cases, infraction of the middle turbinate and pressing it away from the lateral nasal wall towards the median line of the nose is needed, but in some cases the removal of the anterior tip of the middle turbinate is necessary, especially if it is hypertrophied or bulbous. Here, as in all nasal work, conservative measures should be the keynote of our efforts with preservation of the mucosa and its columnar ciliated epithelium; for the resulting scar is covered by a flat squamous epithelium which does not serve the same important function as the former.

(b) Pressure headache is quite different in its origin from that of the vacuum type. It is usually due to pressure of a middle turbinate against the septum, especially the tuberculum, that thick portion at the junction of its upper and middle third. This region has a very vascular mucosa; variations in the amount of venous engorgement depending upon such factors as posture (head lying low, as in sleep), local irritations or infections, traumas in the nose, etc., influence the degree of pressure. The headache may be felt in various regions, such as the forehead, the root of the nose, in or behind the eyes, in the vertex or at times in the occiput. Suppurative, or other inflammatory conditions in the accessory sinuses, are absent in the typical pressure cases. Great relief is often obtained by shrinking the mucosa of the septum and the turbinate in contact with it, by means of cocaine or suprarenalin. If venous engorgement is the etiologic factor, free catharsis, treatment of any cardiac lesion, and avoidance of a low position of the head during sleep or work should be advised. If marked intumescence is present and fails to yield to simple measures such as these, cauterization of the mucosa with trichloroacetic acid or with the galvanocautery is often of great benefit. Care must be used first to avoid destroying any more of the overlying mucosa than is absolutely necessary, by making merely a linear cauterization; and second, to prevent consequent adhesions between turbinate and septum. This may be accomplished by means of petrolatum applied between the two structures, or better still, by placing a thin piece of dental wax between the two surfaces and retaining it in position for a few days, just as has been my custom after cauterization of the inferior turbinates in the so-called

intumescent rhinitis. Should the headaches not be relieved in this manner, we can very easily infract the middle turbinate and press it away from the septum. This is very easily and quickly accomplished without danger or delay to the patient and without pain, if proper cocainization is used. Should the turbinate later spring back in place, infraction may have to be repeated, and if this fails to prevent the recurrence of contact and pressure, or if the space between the septum and lateral nasal wall is so narrow that it is impossible to move the middle turbinate, it is advisable to snare off just enough of the anterior tip of the turbinate to prevent further contact. If the nasal septum is badly deviated, one may avoid the removal of any turbinate tissue by performing a submucous septal resection.

These cases of vacuum or pressure headaches are among the most gratifying ones met with in rhinologic practice, because a very annoying, and at times exceedingly persistent, headache is often quickly relieved, either for a long time or permanently.

SUMMARY

This rapid review of the subject of headaches emphasizes a number of things.

(1) The pain is only a symptom of disorders in the head, the general system or certain organs, such as the heart, kidneys, etc.

(2) The disturbance may be organic or functional, with a great variation in etiology, pathology or mechanical factors.

(3) Since the pain is only a symptom, sedatives for its temporary relief are not sufficient. The actual cause must be sought, and if found, removed where possible, by general or local measures; the latter may be applications, manipulations of a mechanical nature, or operations.

(4) Some cases are practically incurable with means now at our command, but a very large percentage of sufferers may be greatly benefitted if we carefully study the cases. This means that not merely one part of the body, such as the head, should be examined; but that a complete investigation of the patient should be made. If necessary, there should be cooperation with internists, neurologists, surgeons and radiologists, in the careful search for signs and symptoms of disturbed functions in the various organs of the individual, in the endeavor to arrive at a clear and definite diagnosis.

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SERVICE AVAILABLE

There is listed the following definite services that are available to our readers—the members of the State Medical Society of Wisconsin. If you have a need not covered here address the Secretary, Mr. J. G. Crownhart, 558 Jefferson Street, Milwaukee. "Let George do it."

FOR THE MEMBER

1. *Package Libraries* are now available on Cancer, Schick Test, Vaccination, Periodical, Physical Examinations, Insulin, Fractures of Long Bone, Protein Treatment, Control of Communicable Diseases, Goiter, Digitalis, Pneumonia, Diseases of the Knee, Encephalitis, Asthma, Epilepsy, Meningitis and Scarlet Fever. Address Package Library Department, Extension Division, University of Wisconsin, Madison. Material on other subjects compiled upon request.

2. *Medical Books* will be loaned by the Medical Library, University of Wisconsin, Madison, Mr. Walter Smith, Librarian. Order through local library where possible.

3. *Physicians' Exchange Column* is open to all members without charge.

4. *New Scientific Publications* listed in the Book Review columns of this Journal are available for inspection by the members. They are in the Medical Library, University of Wisconsin, Madison. Place your order through your local library where possible or address Mr. Walter Smith, Librarian.

5. *State Laws* and departmental rulings can be secured through the Secretary's office.

6. *Legal Advice* upon questions pertaining to the practice of medicine will be given in so far as is possible. A complete statement of the question or facts must be forwarded.

7. *Inquiries.* Any inquiry with reference to pharmaceuticals, surgical instruments or any other manufactured product which you may need in home, office, sanitarium or hospital, will be promptly answered. Address all inquiries to Wisconsin Medical Journal, or write direct to Cooperative Medical Advertising Bureau, 535 North Dearborn Street, Chicago, Illinois. The Bureau is equipped with catalogues and price lists and can supply information by return mail.

FOR THE COUNTY SOCIETY

1. *Program Material.* Pursuant to authorization by the 1924 House of Delegates the Secretary is arranging to make program material available without cost. The following can now be secured:

A. Departmental Officers of the State Board of Health. Address Dr. C. A. Harper, State Health Officer, State Capitol, Madison, Wis.

B. Clinicians of the Wisconsin Anti-Tuberculosis Association when in vicinity. Address Clinic Dept., W. A. T. A., 558 Jefferson Street, Milwaukee.

C. Councilors and Officers of the State Society. Address the individual.

2. *Annual Statements.* Uniform annual statements can be had without cost. Address the Secretary, advising number desired.

EDITORIALS

THE NEED OF VISION IN MEDICAL TEACHING

THE past half century has witnessed many changes in the medical curriculum. The epoch making discoveries of Pasteur and Koch necessitated a change from older theories and methods. The subjects taught increased with the development of pathology, bacteriology, physiology and later bio-chemistry and the years of study had to be increased to three, four and five of medical instruction after a constantly increasing preliminary requirement — but what of the teachers?

Times change, new conditions arise, but human nature varies little if any. Great teachers are different from their fellows because of a broader conception and truer vision coupled with a desire for service. Osler was one of the greatest teachers of the past century, probably the equal of any clinical teacher of all time. His vision rather than his opportunities was the source of his greatness. Osler was blessed with a favorable heredity and an early environment which gave him a scientific bent. Fortunately greed was lacking in the character of those who influenced him most and he viewed his profession and his teaching positions as a field for service rather than for financial gain.

Had there been a larger proportion of Osler's on our medical faculties during the past half century the costly experiments now being tried in various forms of full time clinical teaching, would not have been necessary. The character of the work accomplished by a clinical teacher of medicine depends on his vision and not on the immediate source of his income.

Our medical colleges were for the most part organized for financial gain and while the expensive laboratory courses developed near the end of the last century eliminated this so far as the students' fees were concerned, there was still the indirect method through referred surgical work and, to a lesser extent, medical consultations. This frequently made it possible for the surgeon to control the policy of the school and surgery received an unwarranted recognition which is still seen in the long list of surgical courses. Too much aggressiveness on the part of professors of surgery and too little on the part of professors of medicine,

is largely responsible for the present attempts to put medical teaching entirely on a full time basis. But will this correct former evils?

There are now three different plans for full and part time professors of the clinical branches. Johns Hopkins and Yale are typical of one type of full time clinical teaching. The professors of clinical subjects may care for private patients but the fees go to the school. Thus far there seems to be serious difficulties in the development of this plan. Many of the former professors on the Johns Hopkins faculty refused to go on a full time basis and it is evident that the success or eventual failure of this scheme will depend on the younger men who are being developed within the institutions. If enough of them have the vision of an Osler it would appear to be satisfactory eventually.

Part time clinical teaching as in the Universities of California and Minnesota necessitates a much smaller budget and thus far appears to have all the advantages urged for the full time plan without its objections.

In our own University a modified full time plan is being tried. The clinical teachers of professorial rank are paid salaries equal to those in the academic branches and, in addition, are permitted to do such private practice as will not interfere with their duties to the school. This plan requires a higher budget than the part time system in vogue in Minnesota. Consequently, in return, the professors may be expected to render a greater service to the state. In paying full professorial salaries the regents relieve our clinical professors from the necessity of entering into competitive practice with local physicians and make it possible for them to do research work and develop skill in highly specialized fields. Men with the vision of Osler would make this the most nearly ideal of the three plans now being tried. As conceived, it removes the specialist teaching a clinical subject from competition in the type of practice cared for by local physicians and surgeons. Yet it makes him available as a physician or surgeon to aid by consultation or surgery in the complicated case. May the professors who are being chosen to guide the medical department of our great University have a broad vision and in their private work seek to compliment rather than supplement the services now rendered by the physicians of Wisconsin.

BACKWARD GLANCE AT ANNUAL MEETING

“THE best meeting in the history of the State Medical Society of Wisconsin.” “We recognized the program to be a wonderfully original conception, and we couldn’t see how it could be put across—but it has been accomplished.”

These and similar comments were frequently heard during and following our Seventy-ninth Annual Meeting.

That it may have been a disappointing program to a possible attendant looking for a *new remedy for rheumatism* or a *Coué formula* to serve as a panacea for a variety of patients’ complaints, is entirely conceivable.

We heard no such complaints, however—nor any other, for that matter.

It was a program calculated to make men think. And here let it be said that if one thing, more than another, marks the attendance of modern medical society meetings in Wisconsin, it is the willingness and desire of men to think, and not merely to be amused.

Another source of gratification to many was the fact that this was essentially a “made in Wisconsin” program. We refer to the fact that it was not made up of a few “imported stars” surrounded by a number of local “fillers” to bask in the reflected light of the headliners.

To Dr. Yates and his associates on the Program Committee goes the credit for boldness in conceiving and producing a new “symphony in medical society meetings”. To the speakers, an equal measure of credit is due for the manner in which each played his individual part, but at the same time subordinated it to the unity of the program as a whole.

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And while we are making our obeisances to the Program Committee and speakers at the recent meeting, sight should not be lost of the work of the officers and of Dr. Davis and his associates on the Arrangements Committee. That the meeting started off under full steam, moved smoothly and in an orderly direction to the very end was no mere accident. Only weeks of painstaking attention to large plans and minor details accomplishes such results. The more unconscious

the membership is permitted to be of the presence and workings of the indispensable meeting machinery, the more perfect is the service such an Arrangements Committee performs.

It was a splendid meeting! What more need be said?

H. E. D.

COST OF SERVICE

IN a recent number of a lay journal¹ not given to haphazard discussions there appears a protest against the high cost of obstetrical service from a woman who has had an experience that leaves her in a rather critical—but withal generously critical—mood. She recalls the good old days when the stork visited her mother, how a kindly family physician rendered competent service, an efficient neighbor was the nurse and all went well. The doctor’s fee was a minor matter, ten dollars.

When the time came she herself took up the burden of motherhood gladly, feeling that in this way she could partially fulfill her obligation to society. May her tribe increase. It appears that as her husband’s sphere of influence widened and her own social activities widened the family kept on growing, and with these changes an ever increasing budget that demanded careful manipulation to keep it on good terms with the family income.

Eventually a baby came that proved to be the bundle of straws that rocked the financial stability of the home. It appears that the obstetrician needed and received the services of another specialist and then there was a hospital experience and a nurse. In their bitter hour this father and mother called for and received the best service (medical, nurse and hospital) that they could secure. When it was over and they were able to take their little one home again they were devoutly thankful that the great calamity had been averted, but when the day of reckoning came, the money cost of their near tragedy was staggering and left a feeling that perhaps it might have been different. Being human and drawing upon her own experiences, she promptly raises the question of why the greatly increased cost of the baby service in a single generation and why should expert service cost so much anyway.

¹The Atlantic Monthly.

A part of the answer is easy in a way. In her mother's day living conditions were not so complex, her mother was probably in a better condition to carry on the burden of maternity because of them and she in her time of need had the service of a wonderful pair of public servants, the old time general practitioner and the genuine practical nurse. Such a physician grew old with his patients, knew them very well, watched over them, advised and at times scolded, but he saw them safely through their troubles. The nurse was a natural born nurse, she must have been practical and efficient, otherwise she could not have done the work she did under the circumstances. Now such doctors are gradually disappearing and such nurses are about as common as old hen's teeth.

Perhaps unwittingly many such good women as our critic represents, have helped to bring about this uncomfortable situation. They demand the best of service when they or theirs are in trouble, a human trait. They do not stop to consider what it costs to produce this service. They insist on their consultant's maintaining a certain social position, a nicely furnished office and all of the etceteras, provide competent assistants and drive a nice car. There is a long period of study and work and the cost is heavy before such a man reaches a reasonably proficient stage in any of the larger branches of medicine and it costs still more to get into the front line and stay there.

A statement has been made that now-a-days only the well-to-do and the very poor receive adequate medical and hospital care without being made to feel the burden. This of course is but a half truth. But why put the burden of such a situation on the doctor, he is but a part of the group who produce it. This good woman tells frankly that her income is limited. We presume from this that her home is modest but comfortable, that her household budget is excellently managed, that her motor is in keeping with the rest of her possessions. Why not go a bit further and readjust that part of expenditures that have to do with medical care. To most persons the cost of such service is a burden, but it need not be a luxurious burden.

Finally we ask this good woman to consider two things. From the first day of medicine and until today, most of the big things in medicine have

been put over by a few men, poor in dollars, rich in ideas, driven on by a vision and guided by a rigorous ethical code. The work that such men have begun and are still doing is made available to the rest of us by a small army of the same sort of men, perhaps not so rich in vision and ideas and perhaps not quite so deep in the grip of circumstance. But they are a very human kind of men, most of them have good wives and children to worry over and educate, they have the same multitude of family cares that she has, even their automobiles are driven by gas that sells for cash. We are sure there is such a man in her neighborhood if she will take the trouble to search him out.

R. E. M.

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ACUTE MYELOBLASTIC LEUKAEMIA*

A CASE REPORT

BY HARRY M. KAY, M.D.

Madison

Cases of acute leukaemia are sufficiently unusual to warrant their recording. Recent studies indicate that the preponderance of acute leukaemias of lymphoid origin over the myelogenous type is not as marked as was formerly supposed. The case under discussion falls into the latter group.

M. B., a Russian Jewish shoemaker, aged 32, was admitted to the Bradley Memorial Hospital, January 6, 1924, complaining of soreness of the mouth and gums.

H. P. I. Nine weeks ago patient developed a nasal cold and grippy attack which continued for about a week. He continued at his work for this period, but thereafter became so weak that he remained at home for two weeks. Backache and sideache appeared at this time. Fever was remarked. After one week of bedfastness was able to move about the house, but blurring of vision had supervened and the gums had become swollen and extremely sensitive. These symptoms have progressed markedly.

During a period of close observation of five weeks preceding admittance a high septic fever had been recorded. Nausea and vomiting had been added to the early anorexia. Four blood transfusions had not materially influenced the clinical course. Delirium supervened.

P. M. H. Irrelevant.

*From the Bradley Memorial Hospital. University of Wisconsin.

S. H. Without bearing.

F. H. Without bearing.

Physical Examination. An undernourished and developed adult, white male. Profoundly prostrated and comatose. Irrational in responses.

Skin: Somewhat pallid with evidence of recent loss of weight. Petechiae are sparsely scattered over trunk and legs.

Head: Hair is "moth eaten" in appearance.

Eyes: Pupils round and equal, respond to light and accommodation. Mental condition does not admit of testing extrinsic musculature. Sclerae are tinted yellow.

Ears: No abnormality determined.

Nose: Mucosa congested.

Mouth: Breath, fetid. Teeth, carious. Gums are greatly swollen and purplish in color. The upper lip protrudes by reason of this swelling which is most marked about the upper incisors. Indeed, so great is this swelling as to entirely submerge the teeth in places. The palate is covered with a thick, dirty grey, foul smelling slough.

Neck: Rather marked enlargement of the anterior and posterior cervical lymph nodes.

Chest: Respirations are shallow and labored. Excursions at base limited. Complete examination not possible by reason of patient's condition. Basal impairment in both axillae. Many fine and large moist rales in bases anteriorly confuse breath sounds. Heart: No thrills. No enlargement to percussion. Short, soft systolic murmur at the apex—less distinctly heard at base. Rhythm regular.

Abdomen: Distended. Liver enlarged. Smooth edge felt 5 centimeters below the costal margin in the right midclavicular line. The spleen is palpable 6 centimeters below the costal margin.

Extremities: Reflexes normal. Axillary, epitrochlear and inguinal lymph nodes are acutely enlarged.

Ophthalmoscopic examination showed indistinct nerve heads together with marked retinal hemorrhages. The hemorrhage was in every stage. Many punctate and feathery areas of hemorrhage were remarked. This picture has progressed since its first appearance on November 20, 1923.

Roentgenograms of the long bones revealed no pathology.

Important among the laboratory examinations were the negative blood cultures and blood Wassermann. The diagnosis, however, rested finally on the blood examinations, which on November 20, 1923, showed:

Erythrocytes	4,600,000
Hemoglobin	80%
Leucocytes	12,000

The stained preparation at this time showed 92% myeloblasts and many nucleated red cells. It was characteristic of this and all subsequent studies that platelets were practically absent. The blood studies showed a rapid fall in the erythrocytes to 1,500,000 by November 27, 1923, and to 750,000 on January 13, 1924. The hemoglobin fell to 11% on the latter date. The leucocytosis noted in the earlier counts had given way to a

leucopenia at the time of admittance, the lowest count (2,400) being recorded three days before death. By this time the bone marrow had become exhausted and the following differential picture presented:

Polymorphonuclear neutrophils	2.4%
Lymphocytes	58.4%
Mononuclears	25.2%
Myelocytes	6.4%
Myeloblasts	7.5%

The red cells in addition to the staining reaction of grave anaemia showed many nucleated forms, megaloblasts and normoblasts. The positive oxydase reaction proved the abnormal leucocytes to be of myelogenous origin.

Rapid decline with repeated showers of petechiae, advancing pulmonary consolidation and Cheyne-Stokes respiration led to a fatal determination eight days after admittance or about ten weeks after the onset of symptoms. The entire course had been a stormy one with a septic temperature, ranging from 100° to 105° F. The pulse and respiration were disproportionately elevated throughout the period of study.

An incomplete postmortem examination was permitted and the clinical diagnosis confirmed. The histologic bone marrow changes were very striking. All normal architecture was lost. No megalokaryocytes were found. Granular cells were likewise missing. The nucleated red cells were atypically arranged. The predominant cells were myeloblastic. Numerous phagocytes contained hemosiderin. The probable pathogenesis of this case has been summarized in the following note by Dr. C. H. Bunting who performed the autopsy:

"The case here reported is of interest from many standpoints, when one takes the clinical picture, the blood findings and the post-mortem findings into consideration. Clinically the blood changes followed an acute respiratory infection. Pathologically, there is evidence of continuance of this infection even into the smaller bronchi. Further the bronchial lymph nodes show a definite infiltration of the gland with large primitive lymphoid cells. It would seem, then, that the primary lesion was bronchial; but further as shown clinically that with involvement of the buccal mucous membranes there was an overwhelming absorption of toxins which affected the bone marrow. This led to an astonishingly rapid production of anaemia, with exhaustion of the red cell-producing marrow and an unusual response with nucleated red cells. At the same time there is the excessive proliferation of the primitive marrow cells without differentiation and an early leukaemic blood picture. In this particular case the number of circulating myeloblastic cells never rose to the high figure often seen

in acute myelogenous leukaemias. On the contrary, during the rapid course of the disease, the leucocytes in the peripheral blood stream soon fell to a figure below normal, but with the atypical primitive myeloblast and micro-myeloblasts forming the major part of the circulating cells.

"The whole picture, then, as presented by this case, must be regarded as the result of an infection of great virulence with the production of a toxin to which the haematopoietic system was particularly susceptible, and to which it was unable to react."

SCURVY*

REPORT OF TWO CASES
BY F. D. MURPHY, M.D.
Milwaukee

Scurvy is generally considered a disease of war-time, famine, and of arctic explorers and sailors. That it does occur sporadically in civil life is generally known, but, because the signs and symptoms do not assume the fulminating character seen in the epidemic type, the condition is often overlooked, temporarily at least. Two cases of scurvy were admitted to this hospital during the last winter (1924-1925).

Case 1. A white male, aged 58, an inmate of Milwaukee County Infirmiry, fell while walking in the ward of the institution and injured his left hip to such an extent that he had to be carried to his bed. He was examined by a physician and because a fracture of the femur was suspected he was transferred to the County Hospital the same day, March 17, 1925.

The examination revealed a large well developed individual, apparently in considerable distress and unable to move the left leg without great pain; the face appeared bloated and the color was ashy gray. Over the inner and outer surfaces of the left leg from the hip to the ankle and extending upon the lower abdomen, involving the scrotum and passing over the inner surface of the right thigh were areas of bluish black discoloration varying in size from a penny to twice that of the hand. There was considerable tenderness on pressure over the entire leg. Examination of the mouth revealed an extremely foul breath and the gums which were spongy and ulcerated bled easily. The urine and the blood pressure were normal. The blood count was as follows: W. B. C. 8600, R. B. C. 4,800,000, Hb. 85, the platelets appeared normal in size, shape and number on the blood slide. Questioning the patient brought out the very important information that the bruise-like spots were present on the leg before he fell. He explained, however, that following the accident, the areas became more numerous. X-ray ex-

amination of the leg showed no fracture. He admitted that his diet consisted of bread, weiners, potatoes and coffee; he denied having eaten green vegetables or fruits, although these edibles were served to him at the institution.

The patient was placed on an antiseorbatic diet and within two weeks the major symptoms had subsided; within a month he was back to his normal physical condition and was returned to the alms house.

Case 2. A white male aged 50, a tailor, entered the Milwaukee County Hospital on February 2, 1925, complaining of pain and swelling of the right knee. The past history was negative. The present illness began in the latter part of December, 1925, when the right knee gradually became swollen and painful to such an extent that walking was almost impossible. He took to bed for two weeks; during this rest the pain and swelling became less but did not subside completely. He got up and went to work despite the fact that weakness, dizziness and pain were present. These symptoms continued until February 1, 1925, when he fainted at his tailor shop and was taken immediately to the County Hospital.

Physical examination revealed a weak, anemic looking man whose skin, especially of the face, was very dark. He seemed very stupid and disinterested in his surroundings and responded to questions in monosyllables. The heart, lungs and abdominal viscera were normal. The right knee was markedly swollen, showed no redness or local heat but an excess of fluid was present in the joint. Passive motion of the limb caused great pain as did also deep pressure on the leg at any point between the ankle and the hip joints. Scattered over the inner and outer surfaces of the right leg from hip to angle were purpuric spots varying in size from one to five centimeters; some were brown, others blue or black. He said he had noticed the spots for the past several months but paid little attention to them as they disappeared from time to time without treatment. The gums were not spongy and no bleeding developed on pressure. The blood count was as follows: W. B. C. 3,500, R. B. C. 3,390,000, Hb. 65, neutrophils, 51, small lymphocytes, 37, large lymphocytes, 6, transitionals, 5. The platelets were examined on the stained film and appeared normal in size, shape and number. The blood Wassermann was negative. The blood pressure was 115/80; there was no fever.

Questioned about his diet he replied that he ate food which he cooked for himself and emphatically maintained that his diet consisted of goulash, wieners, bread and beer, coffee, and sometimes sauerkraut. He became irritable when we placed him on the anti-scurvy diet, and brushed aside the vegetables and fruits saying such food would not put strength into him. After some persuasion he ate the diet prescribed and the swelling, pain, weakness, dizziness and purpura disappeared within six weeks.

COMMENT

It seems amply proven by the clinical and experimental work of the past ten years that scurvy

*From Milwaukee County Hospital Medical Clinics.

is definitely a deficiency disease. The significance of this is that scurvy is a nutritional disorder brought on by the lack of vitamine C in the diet. The exact nature of the vitamine and its mode of action are problems not as yet solved; nevertheless the vegetables and fruits that are rich in its content are well recognized. The ability of these vegetables and fruits to prevent and cure scurvy when they are subjected to unnatural influences such as heat and preservation method, also has been determined. Cooking and drying destroy or greatly lessen the efficacy of the antiscorbutic element of foods. McCollum¹ states that tomatoes are an exception, in that they retain their antiscorbutic property after cooking and tinning; this is in accord with most observers.

The lack of vitamine C results in a series of pathological changes, varying in degree of severity depending to a great extent on the length of time the diet has been deficient. The chief changes, when the disease is well developed, are weakness, dizziness, anemia, hemorrhage and spongy gums.

Weakness is insidious in on-set and may become profound, resembling the asthenia of Addison's disease. It is practically the earliest clinical symptom and the first that is dispelled by treatment. Anemia is generally mild in character and the platelets are normal in number and appearance. The neutrophiles may be decreased and lymphocytes increased proportionately. Hemorrhages, manifested by spongy bleeding gums, cutaneous and subperiosteal hemorrhages and at times hematuria are said by Hess² to be due to the weakening of the blood vessel wall or to changes in the endothelial lining of the vessel. Hess also believes that sponginess and at times ulceration of the gums is due to secondary infection. This, however, is open to question. The heart's rate may be increased, but fever is not a feature of the disease.

The diagnosis of scurvy is not always simple, especially when it occurs sporadically. The records of this hospital and the literature show that scurvy has been taken at times for tuberculosis of the knee joint, peritonitis, appendicitis, neuritis, osteomyelitis, nephritis, rheumatism, fracture and other things. The danger of overlooking mild forms of scurvy occurring sporadically has been emphasized by many but especially by Hilton Fagge³ who saw many such cases. The following data, however, when clearly elicited, seem to be quite efficient guides to the diagnosis:

- (a) History of living for a long period of time on a diet that lacks fresh vegetables.
- (b) Subcutaneous hemorrhages.
- (c) Spongy gums.

If scurvy is suspected, but there is uncertainty as to diagnosis, it may be settled quickly by placing the patient on the antiscorbutic diet, and watching the reaction of the patient.

The purpura occurring with rheumatic fever (Schonlein's Disease) and other diseases is generally diagnosed by the characteristic features of the associated disease.

The treatment of scurvy is very simple and generally quite efficacious; some patients, however, respond more readily than others. A normal diet is constructed using as many of the foods which are high in vitamine C as is possible and introducing others in small quantities for flavor and variety. Salads containing raw fruits and vegetables are used. It is often difficult for the patient to masticate some of these foods because of diseased gums. In such cases, lemonade, orangeade and stewed tomatoes are used. The following vegetables and fruits according to Eddy⁴ are rich in vitamine C: oranges, lemons, tomatoes, lettuce and cabbage. Onions, potatoes, spinach and grapefruit are valuable but not in the first class. Milk and cooked meats are conceded by most observers to be low in vitamine C content.

Stefansson,⁵ who reported his experiences with scurvy during his arctic expeditions, believes that fresh, raw meats and especially liver are very valuable antiscorbutics.

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HOSPITALS NOT EXEMPTED

A member in southern Wisconsin has been informed that it is necessary for a hospital to obtain a state permit from the State Prohibition Commissioner to use whiskey, wine, alcohol, and the like in a hospital. Before a state permit may be obtained, the federal permit must be secured.

The cost of the state permit for hospital use is \$10.00.

PREVENTIVE MEDICINE

Edited by

W. D. STOVALL, Chairman

Section on Preventive Medicine, State Medical
Society of Wisconsin

THE TYPHOID CARRIER

BY H. M. GUILFORD, M.D.

State Board of Health

Madison

A few years ago, ten or fifteen or thereabouts, it was the common custom of many communities to pour the communal sewage into a nearby stream or lake and then take part of it back again in the communal water supply. It was likewise at no remote date that most of our large cities received their milk supplies unsupervised and unguarded. With the rectification of these conditions, and the more our communities have succeeded in cutting the intervening pathways that typhoid follows in its transit from one person to another, the less has been that disease. So successful have been the measures directed against typhoid and its kindred maladies that every community is obligated to its citizens to follow out to full knowledge the known sanitary measures aimed at the prevention of typhoid.

Typhoid has fallen by leaps and bounds but is not the entirely dormant disease that some have fancied, for it is still with us in considerable numbers every year and only awaits fuller opportunities for attacking its victims.

In the consideration of water supplies it has been experimentally proved that the typhoid bacilli will live for three or four days in sewage polluted water, upwards of two months in a lake, and toward a year in dark recesses of the cold clear water of a well. It will not live forever there. In the transit through the medium of water there must be a case of typhoid or a carrier back of it all and that at no great date. With the relative paucity of cases now developing in our cities the major blame of water pollution must be laid on the existence of carriers the majority of whom received their infection when typhoid was rife in our various communities. The chronic typhoid carrier is the main culprit that is keeping alive the disease, and serves as the constant infector of our streams and lakes through one season and another, and lights up the active cases who more deeply complicate the situation with virile and abundant bacteria.

THE NUMBER OF TYPHOID CARRIERS

Three or four years ago A. L. Garbat in a monograph published by the Rockefeller Institute recorded his findings in the examination of 164 persons recovering from typhoid fever. The examinations he made were bile examinations through duodenal cultures. Through this means he aimed at discovering the true number of typhoid carriers rather than relying upon more uncertain stool tests. He found that 32 per cent remained carriers beyond convalescence and that 17 per cent of these were carriers for one month, 8 per cent for two months and 3 per cent for three months, and that three or four per cent became chronic carriers. The length of time these persons remained chronic carriers is of course uncertain, but individuals have been found among them with the history of an attack of typhoid fifty or more years before. It is reasonable to assume that the typhoid bacillus, once forming a natural habitat within the body may often remain a life-time. Attempts have been made to reckon the probable number of carriers within the population by reference to the number of cases that existed over a certain number of years. Take for instance the year 1910 in Wisconsin; there were 567 deaths from typhoid in that year and if as commonly computed there were ten cases to one death, the result would be 5,670 cases, and allowing three per cent for chronic carriers, the final result would be one hundred seventy carriers. The accumulation for several years would amount to many hundred. This is, of course, purely speculative but the history of the disease proves that there are a great many undiscovered carriers among our population.

TYPHOID IN WISCONSIN IN 1924

In 1924 there were 261 cases of typhoid fever reported to the State Health Department and 28 deaths. This is the low record for Wisconsin and as far as we can find the low record for the states in the registration area. For some unexplained reason many of the states of the union have a higher typhoid rate thus far in 1925 than in 1924 and Wisconsin is among them, and we bid fair to exceed last year's statistics.

In an analysis of the 261 cases we find that 23 cases occurred in a water outbreak, due to infected wells in a creviced stone formation. There were two small outbreaks on milk supplies, in which a carrier proved responsible for the situa-

tion, and a third milk outbreak with presumptive, but not definite proof of the source. Three or four cases were stated to be involved in the oyster outbreak that occurred in Chicago and more eastern cities, and ten cases occurred in a city in which there had been a water outbreak the year before with only presumptive proof of the sources. Beyond this most of the cases were well scattered about the state. In a few instances there were multiple cases in a family, but in most instances there was a single case only in the community. There was nothing special in the summer resort region despite the fact that there are presumably favoring conditions there to further the disease.

THE CAUSE OF THE SINGLE CASE

The single case occurring in the family generally remains a mystery as to its source. It may have been caused by some foodstuffs passed through the hands of a carrier. The victim may have received his infection locally or while visiting at some distant spot. Many of them, however, are very likely to have been caused by someone in the family who had a case some years back. We do not search for these carriers as we should but with the changing developments in typhoid we are more likely to do so in the future. In the search for the typhoid carrier we often find a history such as the following: For instance, B. A. comes down with typhoid fever. The family history reveals that C. A. had typhoid fever two years back. Five years back of this D. A. had typhoid fever and back of this M. A. had typhoid twelve years ago. This is a fair sample of some of those histories. A widal test from M. A. reveals it positive. If M. A. should be a worker upon milk he would doubtless have given rise to local epidemics of the disease where the milk was distributed. If he is a careful and cleanly person he is not as likely to transmit typhoid to other members of the family. It depends upon the opportunities given him.

The typhoid carrier is usually a periodic excretor. Some of them are more intensive carriers than others. The claim has been made that 95 per cent of chronic typhoid carriers will have a positive widal test. This test is, therefore, more likely to be the cause of locating the carrier than is the stool test because of the periodic excretion of the bacilli. To make absolutely sure, however, stool tests should be taken repeatedly following a

positive widal until the parasite is found. A positive widal alone is presumptive evidence only. Most of the carriers so far found have been identified because of local milk epidemics or multiple cases laid to cooks or waitresses to whom reasonable suspicion is directed.

WHAT TO DO WITH A CARRIER

It is sometimes considerable of a problem as to how to deal with a carrier. If they work upon foodsupplies they must of necessity cease their occupation. Some of them are of the traveling kind and impossible to keep track of. In the case of a carrier being a dairyman the adequate pasteurization of all the milk and milk products of that form will safeguard it. Such arrangements are usually no great hardship to this dairyman. The immediate family should always take vaccine and repeat it every three years. When repeated cases of typhoid have occurred in a family over a series of years the family should welcome the information as to who and who are not carriers, in order that the others may be protected. In the pathology of the carrier it is stated that the bacilli are carried in the gall bladder; in the biliary radicals of the liver; and in the large intestines; one or the other of these conditions prevailing in the individual. It is therefore easy to be seen why removal of the gall bladder for cure has resulted in failure more often than success. Recently someone has suggested hexyl-resorcin as a remedy, but results are not yet apparent. The plumbing conditions and sanitation in the home of a carrier are of course factors in preventing the spread of the disease.

Two of the states of the union which have gone extensively into the handling of carriers lay down rigid rules to govern them. One of these states allows the pasteurization of milk from a dairy, having a carrier, but it must be done separately and a record kept by the creamery or the pasteurization plant. The same state has also set aside a fund for distribution among those carriers made indigent or inconvenienced by regulations. The physicians of Wisconsin are likely to find that in the future the hedging of typhoid devolves into more work upon the chronic carrier.

DISSECTING ANEURYSM WITH SIGNS OF AORTIC INSUFFICIENCY

W. H. Resnik and C. S. Keefer, Baltimore (*Journal A. M. A.*, August 8, 1925), report a case of dissecting aneurysm in which there were present during life the typical signs of aortic insufficiency; yet at necropsy the aortic valves were found to be normal.

PUBLIC HEALTH NOTES
FROM THE
STATE BOARD OF HEALTH

It is not the duty of a county nurse to expel a child from school; that authority rests in the school board. After she has examined the child and presented to the board her findings as to mental and physical defects, her duties in the case cease unless the case demands follow-up calls and work of that nature.

From a physician's letter: "I am treating a case of rabies with Pasteur treatment and the town board wishes to know if this expense is to be deducted from the dog tax fund for the town, or should be paid from general fund." Reply was made that, unless the victims are unable to pay for treatment, the expense must be met by them or those responsible for their support. "It is our understanding," said the board, "that the dog tax fund can be used in compensating owners for property destroyed by dogs, such as the killing of sheep or other domestic animals. If the case you are treating should be treated at public expense, it is our belief that the treatment should be provided from the general fund of the town and not from the dog tax fund."

In cases of virulent small pox, the board is advising health officers to refuse to permit well members of the family to leave the premises even though they submit to vaccination. This is because in some cases exposed persons develop a virulent type of small pox while the vaccination is working

There is no law nor any regulation of the state board of health, it was stated, which prohibits sale of iodized table salt through the grocery trade. The state board of health advises, however, against the use of such salt as a preventative of goiter unless iodine tablets also are taken. The dairy and food department has ruled that iodized salt cannot be sold through the grocery trade, on the ground that this constitutes an adulteration, and decrees that it should be sold as a drug.

When school books are destroyed in a home quarantined for scarlet fever, is the town liable

when the parents are able to furnish new ones, and where the district does not furnish free textbooks? It was replied: "If private property is destroyed by order of the local board of health to prevent the spread of disease, the proper local authorities upon the certification of the health officer that such destruction was necessary, may reimburse the family in a sum not to exceed \$100, and in no case shall the sum paid exceed the actual value of the articles destroyed."

What is the proper board to act upon an ordinance regulating the sale of milk, the village board or board of health? Reply was made: "The question of adopting local ordinances regulating the milk supply has been undertaken entirely by the common council in cities or the village board in towns and villages. We believe it would be legal for the local board of health to adopt and publish such an ordinance, but since the necessary funds for carrying on the work would have to be supplied by the town or village, we think it is preferable to have such an ordinance adopted by the village board."

"If parents object to medical supervision of their children in school and the child returns to school after illness, has the school physician or nurse the right to inspect the child as to fitness for school attendance?" Answer: If an official rule has been established requiring a health officer's permit to return to school, such procedure is legal. In the absence of such established rule, the school physician or nurse lacks authority to make such examination. If parental objection is made in writing, no effort should be made to examine such children. There is a mandatory effect in the requirement for a certificate of freedom from communicable disease as a condition for return to school.

"In the case of tuberculosis of the bone or skin or other tubercular affliction where there is a running sore, if fresh dressings are applied regularly and the child is kept reasonably clean, there is no reason why it should not be permitted to attend school. If, however, the parents are careless and the child is offensive or dirty in body or clothing, it is the duty of the school board to notify the parents and exclude the child from school. A child with tuberculosis of the lungs is prohibited from attending school."

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LIST OF EXECUTIVE OFFICERS OF COUNTY MEDICAL SOCIETIES

Table with 3 columns: County, President, Secretary. Lists 90 counties and their respective officers.

SOCIETY PROCEEDINGS

BARRON-POLK-WASHBURN-SAWYER-BURNETT

The members of the B-P-W-S-B County Medical Society met at Barron on the afternoon of September 1st. An excellent program was presented by the following physicians: Dr. J. A. Riegel, St. Croix Falls, on "The Typing of Pnenmonia;" Dr. A. D. Galloway, Clayton; Dr. D. L. Dawson, Rice Lake, "Rectal Injuries, With Report of a Case;" Dr. A. E. Colvin, St. Paul, Minn., "The Varying Reaction and Clinical Manifestation of Infection," illustrated; and Dr. W. H. Hengstler, St. Paul, Minn., on "Mereurochrome in Acute Infections of the Nervous System."—I. G. B.

BROWN-KEWAUNEE

Over thirty members of the Brown-Kewaunee County Medical Society met for the annual chicken dinner of the society at Stangleville on Tuesday evening, September 8th. Following the dinner, short talks were given by Mr. J. G. Crownhart, secretary of the State Society and Dr. T. L. Harrington, the Wisconsin Anti-Tuberculosis Association, Milwaukee. A short business session concluded the meeting.—F. M. H.

DANE

The dinner and meeting of the Dane County Medical Society at the Kegonsa Hotel, Stoughton, on September 9th, was well attended. Following the dinner Dr. A. M. Carr, health officer for the city of Madison, spoke on "Immunization in the Pre-school Period." Dr. C. K. Dwight of Madison delivered a talk on "Early Diagnosis of Certain Eye Diseases by Means of a Slip-lamp." Sidights on their recent European trip were given by Drs. Joseph Dean, R. T. Cooksey, W. T. Lindsay and T. W. Tormey.—L. F.

EAU CLAIRE AND ASSOCIATED

Between forty and fifty members of the Eau Claire and Associated Counties Medical Society attended the dinner-meeting at the Eau Claire hotel on Monday, August 31st. Dr. W. M. Craig of the Mayo Clinic presented a paper on "Lesions of Peripheral Nerves" which was illustrated. Dr. Craig also read the prepared paper on "Present Status of Anterior Poliomyelitis" by Dr. Edward C. Rosenow of the Mayo Clinic, who was unable to attend. An address on "Goiter" was given by Dr. M. O. Nelson, also of Rochester. An interesting discussion followed on goiter and symptoms and treatment of infantile paralysis. Dr. V. A. Gudex told of recent experiences with epidemics in the locality about Arcadia and of places in Minnesota.—H. M. S.

GRANT

The Grant County Medical Society held their annual outing meeting at Riverside Park, Cassville, on September 8th. A heavy rain interfered with the attendance but those who braved the elements were rewarded by the excellence of the program and the delicious cat-fish dinner. Dr. Edward Evans, La Crosse, presented a paper on "The General Practitioner" and Dr. C. C.

Lytle, Dubuque, read one on "Lactic Acid as an Infant Food."—M. B. G.

LAFAYETTE

The members of the LaFayette County Medical Society held a meeting at Darlington on September 4th. Dr. H. B. Moe of Blanchardville was elected president and Dr. W. W. Peck, Darlington, was elected secretary. —W. W. P.

MARATHON

The regular monthly meeting of the Marathon County Medical Society was held at Mount View Sanatorium on Sept. 11th. At the close of the meeting a dinner was served the members.

MARINETTE-FLORENCE

The Marinette-Florence County Medical Society gave a dinner on September 11th in honor of Dr. Simon Berglund, who has just returned from the European Clinics. The menu was worthy of the occasion and the floral pieces were beautiful. Doctor Berglund gave a most interesting talk on his experiences abroad. In closing his address, however, he said the finest thing he saw was the Statue of Liberty on his return home. —M. D. B.

MILWAUKEE-WAUKESHA

Members of the Milwaukee County and the Waukesha County Medical Society and their families held a joint meeting at Brook Hill Farm, Genesee Depot on Wednesday, September 2nd. The program consisted of hog calling contests, horse shoe pitching and baseball game. Following the games the physicians inspected the dairy farm and held a certified milk clinic. A lawn supper was served, Mr. Howard T. Greene, owner of the farm, being host and master of ceremonies.—E. L. T.

OCONTO

The Oconto County Medical Society held its annual meeting in Oconto Thursday afternoon, September 10th. Among other business transacted, election of officers for the ensuing year took place. The new officers elected were: President, Dr. C. W. Stoelting, Oconto; Vice President, Dr. L. H. Baldwin, Gillett; Secretary-Treasurer, Dr. R. S. Elliott, Gillett.—C. W. S.

WASHINGTON-OZAUKEE

Members of the Washington-Ozaukee County Medical Society held their September meeting at the Hartford Hospital on Thursday, September 10th. Dr. Joseph P. McMahon, Milwaukee, presented a paper on cancer and radiotherapy which was illustrated with slides. A short clinic preceded the paper at which a case of carcinoma was examined and discussed by Drs. McMahon and T. L. Szlapka, Milwaukee. Adjournment was taken at 6:00 p. m.—A. H. H.

NEWS ITEMS AND PERSONALS

Dr. B. J. Wadey, Belleville, is preparing to move to Sycamore, Ill., where he will establish his practice in the future. In moving to Sycamore Doctor Wadey will be

returning to familiar scenes as he was born and received his early education in that vicinity. The doctor has been practicing in Belleville for the past twenty-three years.

Dr. Clarence M. O'Hara, newly licensed in the state of Wisconsin, will establish his practice in Avoca. He is a recent graduate of Rush Medical College, Chicago.

Dr. C. J. Nedry has sold his practice and case records at Chippewa Falls to Dr. Merton Field, who comes to this state from Minnesota. Doctor Nedry is planning to spend some time in study in the East and in Europe.

Dr. S. Salan, formerly of Fort Wayne, Indiana, has arrived at Waupaca to become associated in the practice of Dr. C. W. Andrews. Dr. Andrews expects to make a vacation trip to California and Mexico of several weeks' duration. He also proposes to spend a few months attending clinics in Chicago and at the Mayo Clinic at Rochester, Minn., returning to Waupaca some time in March to resume his duties with the new associate.

Dr. Walter S. Haven, Racine, who has been seriously ill for several weeks is reported as improved. Dr. Haven became ill the latter part of July and was removed from his home to St. Luke's Hospital, where a transfusion of blood was found necessary.

Dr. F. H. Powers, whose former home was at Beaver Dam, but who has been practicing in southern Illinois for several years, recently arrived at Antigo to become associated with Dr. E. R. F. Murphy. Dr. Powers has taken special work in the Chicago Lying-In Hospital under Dr. Joseph B. DeLee and will specialize in internal medicine and obstetrics.

Dr. G. J. Flanagan and Dr. E. J. Belinske of Kaukauna are planning the erection of a building on the north side of the city. Plans as to the type of building or when construction would be started are not as yet completed.

The most recent improvement at Pureair Sanatorium at Salmo, near Bayfield, is the installation of a complete and modern X-Ray machine. Funds for the purchase of the machine were raised through the efforts of the women's clubs of Bayfield County which started the movement several months ago. This additional equipment enables Dr. W. E. Fawcett, superintendent, to treat his patients with all modern devices now in use in leading sanatoria.

Dr. Alvin J. Brah has recently announced his return from Europe after extensive study in the various European Clinics. He will limit his practice to eye, ear, nose and throat, with offices in the Plankinton Building, Milwaukee.

Dr. James E. Paschen, Milwaukee, who has been taking a special course in cardiorenal diseases at Harvard Medical School, has returned to the city after an absence of three months.

Dr. W. F. Meyer and family, Eagle River, left Tuesday, September 15th, with their car and camping equipment for a trip to California, with the intention of traveling from there to Florida where they will spend the winter.

Although medical men are known to relieve distress at all times, it is believed that Dr. C. J. Smiles, Ashland, has taken care of one of the most peculiar accidents on record.

While the doctor was returning to Ashland from Iron River, a deer, blinded by the lights of his car, ran out of the brush beside the road and crashed headlong into the automobile. Stunned by the force of his charge, the deer lost consciousness. Dr. Smiles got out of the car and rendered first aid. After reviving the stunned buck the doctor led him up and down the road for a few minutes until he had fully regained consciousness. Dr. Smiles then released the animal which bounded away into the woods. "I'll bet he had a headache the next morning, in spite of all I could do," remarked the doctor.

MARRIAGES

Dr. Francis B. McMahon, Milwaukee, and Mrs. Willabelle Hicks Eaton, Oshkosh, were married Wednesday, September 23rd, at Chicago.

DEATHS

Dr. J. I. Suby, Stoughton, died August 29th following a long illness with cancer of the stomach. Dr. Suby was born in Dodge County, Minn., in 1873 and was graduated from the Central College of Physicians and Surgeons of Indianapolis in 1900. He started his practice at Deerfield, moving to Stoughton in 1903, where he continued to practice until four months ago. Dr. Suby is survived by his wife and one son.

Dr. B. G. Stockman, Woodville, died on September 1st. Pernicious anemia was the cause of his death. Dr. Stockman was born in 1872 and was graduated from the University of Minnesota Medical School in 1896. He practiced in Woodville for twenty-nine years, marrying Linda Wilford in 1897.

Dr. Stockman was a member of the St. Croix County Medical Society, the State Medical Society of Wisconsin and the American Medical Association. He was elected an honorary member of the State Medical Society just prior to his death.

SOCIETY RECORDS

NEW MEMBERS

Hedblom, Carl A., 1 So. Pinckney St., Madison.
 Hammond, Reginald, Manitowoc.
 Steckbauer, Jos. W., Manitowoc.
 Moriarty, Leo J., Two Rivers.
 Morris, K., Merrill.
 Halgren, J. A., Menomonie.
 Scott, H. E., Argyle.

CHANGES IN ADDRESS

Sears, H. B., Madison, to 81 1/2 Bond St., Oshkosh.
 Pike, Chas. H., Niagara, to 200 E. Delaware Pl., Chicago, Ill.

NINTH COUNCILOR DISTRICT MEDICAL SOCIETY

This picture of the Ninth Councilor District Medical Society was taken at the recent meeting held at Wisconsin Rapids. The picture was taken just in front of the Wisconsin Rapids Country Club.



Left to right:

Back Row.	Middle row.	Front row.
1. Dr. M. L. Jones.	1. Dr. S. A. MacGregor.	1. Dr. E. J. Phelps.
2. Dr. H. T. Schlegel.	2. Dr. W. J. Fahrner.	2. Dr. Chas. Crowley.
3. Dr. F. A. Winneman.	3.	3. Dr. W. D. Merrill.
4. Dr. F. J. Friend.	4. Dr. F. H. Kelley.	4. Dr. F. A. Southwick.
5. Dr. E. K. Morris.	5. Dr. W. H. Bayer.	5. Dr. F. R. Krembs.
6. Dr. Edward Evans.	6. Dr. E. B. Quade.	6. Dr. J. W. Coon.
7. Dr. Hart Beyers.	7. Dr. D. T. Jones.	7. Dr. D. Waters.
8. Dr. V. A. Mason.	8. Dr. J. F. Smith.	8. Dr. J. M. Freeman.
9. Dr. S. M. B. Smith.	9. Dr. H. H. Milbee.	9.
10. Dr. A. B. Rosenberry.	10. Dr. Wilson Cunningham.	10. Dr. F. X. Pomainville.
11. Dr. Edward Hougén.	11. Dr. A. J. Looze.	11. Dr. D. S. Reis.
12. Dr. H. Raasock.	12. Mr. J. G. Crownhart.	12. Dr. J. D. Lindores.
13. Dr. V. E. Eastman.	13. Dr. E. P. Crosby.	13. Dr. Carl Von Neupert, Jr.
14.	14. Dr. George Pomainville.	
	15. Dr. W. F. Cowan.	
	16. Dr. Joseph Barber.	
	17. Dr. T. E. Loope.	

Jacobs, S. A., New York City, to 1633 University Ave., Morris Heights, Pa.

Speck, J. T., Park Falls, to 5315 Kenmore Ave., Chicago, Ill.

Wadey, B. J., Belleville, to 202 W. State St., Sycamore, Ill.

Smith, L. D., Boston, Mass., to 272 Ogden Ave., Milwaukee.

Looze, A. J., Wisconsin Rapids, to Superior.

CORRESPONDENCE

Thank you, Georgia!

"You are publishing a wonderful Journal! We like it."—Allen H. Bunce, M.D., Editor, Journal Georgia Medical Ass'n.

SPEECH CLINIC ESTABLISHED

Madison, Sept. 15, 1925.

Mr. George Crownhart,
558 Jefferson Street,
Milwaukee, Wisconsin.

Dear Mr. Crownhart:

For the information of those who are from time to time consulted as to the diagnosis and treatment of defects of speech, the Department of Speech of the University of Wisconsin calls attention to its speech clinic maintained throughout the regular academic year.

For cases outside of the student body, the clinic is largely diagnostic, but aside from the study of cause

and nature of the defect advice is given as to the method of treatment and as to where such treatment can be secured.

In addition to this diagnostic clinic, a limited number of widely divergent type cases will be admitted to six weeks' course of training in a demonstration clinic conducted in connection with the 1926 Summer Session. This is a continuation of a plan adopted at the beginning of the summer just closed. Application for this clinic should be accompanied by description of defect and medical history, or better still, made by the patient in person.

Admission to both clinics is free with the usual understanding that advanced students in the science of Speech Correction will be permitted to see these cases and learn their histories. Cases sent to the clinic should be accompanied by a medical history.

Appointments at Madison must always be arranged in advance by mail or wire with Professor Robert West, Bascom Hall, University of Wisconsin.

Sincerely yours,

HLB/FEH

Helen L. Blake.

Read and endorsed by Robert West.

SCHOLARSHIPS AVAILABLE

Scholarships on the Oliver-Rea Foundation for graduate study in Medicine are available at the New York Post Graduate Medical School and Hospital. Inquiries should be addressed to the Dean, 301 East Twentieth Street, New York City.

Dr. Joseph F. Smith, Wausau, Named President for 1926; Delegates and Councilors Map Out Work for Ensuing Year

With the unanimous approval by the House of Delegates of the report of the Committee on Nominations, Dr. Joseph F. Smith of Wausau, long Councilor of the Ninth Councilor District and a Delegate to the American Medical Association, becomes President of the State Medical Society of Wisconsin on January first next. Dr. Carl Henry Davis, Milwaukee, member of the Program Committee of 1923 and Chairman of the Arrangements Committee of this year, will become the First Vice-President. Dr. W. E. Fairfield, Green Bay, Chairman of the Program Committee of 1924, becomes Second Vice-President and Dr. W. D. Stovall, Madison, Chairman of the Committee on Health and Public Instruction, will become the Third Vice-President. The Committee reported in favor of Madison as the place of meeting for 1926.

MAJOR ACTIVITIES FOR 1926

Following the secretary's announcement of the election of officers to the general sessions on Thursday afternoon, Dr. Joseph F. Smith, president-elect for 1926, was introduced to the members by President Cunningham. In accepting his election Doctor Smith declared:

"Members of the Wisconsin State Medical Society: I should certainly be ungrateful not to express some appreciation of the honor that you have conferred upon me. I have had the privilege of attending every meeting of the Wisconsin State Medical Society since I came into the state. I have always been an admirer of the work done by the organization and of the men who have been charged with carrying on that work. It has been my privilege to serve the Society during this time as councilor for one of the districts in the central part of the state, and during that time I have had the pleasure and the privilege of coming in contact with the men out in the rural districts who are the first line of defense in our medical efforts.

"I have also had the pleasure and the privilege of representing this Society, or helping to represent it, rather, in the House of Delegates of the American Medical Association, and during that time have had the opportunity to see how the great work of our national organization is carried on.

"During the last year, under the administration of President Cunningham, and with the splen-

did work of our able Secretary, and the wonderful cooperation of the men throughout the state, the Society has been able to carry out a program which embodies some important matters of medical legislation. It seems to me that in taking up this year's work we should have an objective also, and I believe that the objective that we should set before us for the coming year should be an objective having a twofold aspect; first, we should endeavor to link up our organization with the laity, with the public more intimately than we have done heretofore; and, secondly, in order to do this, our first great endeavor should be to reach the man in the small rural communities, in the towns which have only one, two or three doctors, the men who are not here today and the men who are, unfortunately, seldom seen at any of our medical meetings. It seems to me that we should set before us as an objective to be attained during the coming year these two points which, to my mind, are the outstanding needs of our organization at the present time. I thank you." (Applause.)

The Nominating Committee also nominated Dr. J. V. R. Lyman, Eau Claire, to succeed himself as a member of the Committee on Hospitals and Drs. J. P. Koehler, Milwaukee and W. W. Bauer, Racine, as members of the Committee on Health and Public Instruction. They succeed Drs. R. G. Washburn, Milwaukee, and I. F. Thompson, Milwaukee, removed.

Other elections by the House were as follows:

Councilors: Drs. O. B. Bock, Sheboygan, Fifth District and F. Gregory Connell, Oshkosh, Sixth District, both re-elected.

Delegate to the American Medical Association: Dr. Joseph F. Smith, Wausau, re-elected.

Alternate Delegate to the American Medical Association: Dr. R. E. Mitchell, Eau Claire, re-elected.

Editorial Board of the Journal: Drs. Oscar Lotz and H. E. Dearholt, Milwaukee, and Joseph F. Smith, Wausau, re-elected.

RESOLUTIONS ADOPTED

Two major resolutions were adopted by the House of Delegates. The House petitioned the President, the Assistant Secretary of the Treasury (Gen. L. C. Andrews) and Senator Irvine L. Lenroot to have rescinded a recent order provid-

ing that Wisconsin as a federal permit district should be divided into the eastern and western judicial districts to be administered from Chicago and Minneapolis respectively. The resolution pointed out that the discontinuance of the Milwaukee office and the state as a single district would deprive Wisconsin physicians of the privilege of conducting their business in person when that became advisable, that the division would lead to frequent delays, to confusion regarding boundary lines, and in general, would operate to deprive Wisconsin of the consideration to which it was entitled.

The second resolution welcomed Glenn Frank as President of the University of Wisconsin and pledged him the support of the medical profession of the state in his new work.

INTERIM COMMITTEE AUTHORIZED

On the joint questions of amending the constitution to provide two year terms for councilors and to accept proposed changes in the constitution suggested by the American Medical Association, the House of Delegates voted to submit these and all similar questions to an interim committee. This committee will be appointed by the president and will bring in a full report and recommendations to the 1926 House of Delegates.

APPROPRIATIONS VOTED

The House of Delegates, where all appropriations must originate, made the following appropriations for 1926:

1. Presentation of Hygeia to those public officials charged with the duty of enacting and enforcing public health laws. Appropriation \$500.

2. Publication of a Third Annual Lay Issue of the Wisconsin Medical Journal. Appropriation \$1,000.

3. Establishment of a scientific news service for the daily and weekly press. Appropriation of \$2200 of which \$1100 received immediate Council approval. Service to be established on January first.

4. Presentation to the membership of the handbook on Cancer. Appropriation of \$500.

5. Continuance of partial subscription to the crusader as embodied in the report of the Committee on Health and Public Instruction. Appropriation \$300.

COMMITTEES FOR SPECIAL STUDY

The House of Delegates approved the recommendations of the secretary that special study be given during the ensuing year to the questions of licensure of the specialties, commitment of the insane, and the question of needed lye legislation. These questions were all referred to the Committee on Public Policy and Legislation, which committee will appoint special sub-committees in each of the separate fields of work. Reports will be made to the 1926 House of Delegates.

On the question of dues, the House unanimously voted to maintain the present state dues of \$9.00.

REFERENCE COMMITTEES APPOINTED

To expedite the handling of the reports and recommendations the House authorized the appointment of three special reference committees to serve during the sessions. The following committees were subsequently appointed by the president:

Report of the Committee on Public Policy and Legislation: Dr. A. J. McDowell, Soldiers Grove, Chm., Dr. A. J. Gates, Tigerton, and Dr. J. C. Baird, Eau Claire.

Reference Committee on Resolutions: Dr. T. W. Nuzum, Janesville, Chm., Dr. H. P. Greeley, Madison, and Dr. Frank Thompson, Milwaukee.

Committee on Report of the Secretary-Managing Editor: Dr. W. E. Bannen, La Crosse, Dr. J. F. Mauermann, Monroe, and Dr. J. M. Dodd, Ashland.

The Committee on Nominations elected by the House, one from each councilor district, was composed as follows: First, Dr. A. W. Rogers, Oconomowoc; Second, Dr. George W. Nott, Racine; Third, Dr. T. W. Nuzum, Janesville; Fourth, Dr. A. J. McDowell, Soldiers Grove; Fifth, Dr. J. M. Kelley, Cato; Sixth, Dr. D. N. Walters, Fond du Lac; Seventh, Dr. W. E. Bannen, La Crosse; Eighth, Dr. A. J. Gates, Tigerton; Ninth, Dr. L. E. Spencer, Wausau; Tenth, Dr. D. L. Dawson, Rice Lake; Eleventh, Dr. J. C. Wright, Antigo, and Twelfth, Dr. Frank A. Thompson of Milwaukee.

Three sessions of the House of Delegates and four sessions of the Council were held during the Annual Meeting. The stenotypic report of the transactions of the House and Council will be contained in the December issue of the Journal.

Over Seven Hundred and Fifty Attend 79th Annual Meeting at Milwaukee; Scientific Sessions Commended

One-third of the entire membership of the State Society attended the 79th Annual Meeting, a registration that sets a new record in Wisconsin. In addition, the Society was host to upwards of one hundred guests, mainly visitors from nearby states.

That the innovation in scientific programs was a distinct success was the comment heard on every side. The timed programs ran close to schedule and the program was never over fifteen minutes behind the published schedule. Several checks on attendance at the scientific sessions proper, clearly showed that a new record had been set in attendance at those sessions as well as in general attendance at the meeting.

TWO HONORED

Two of those who appeared on the scientific program were particularly honored by the Society. The Council conferred upon Prof. M. F. Guyer, Department of Zoology and upon Prof. Harry Steenbock, Department of Agricultural Chemistry, Associate Membership in the Society. The constitution provides that such membership may be conferred by the Council on those prominent in the sciences allied to medicine.

The entire program of thirty-four papers and two special films was given exactly as published with but one absentee due to illness.

MANY ATTEND BANQUET

Upwards of two hundred and fifty attended the Annual Banquet held at Hotel Pfister on Thursday evening. At this banquet the President, Dr. Wilson Cunningham, gave the President's Address on the subject "The Origin and Progress of Medicine." Dancing and cards followed the address.

The Smoker at Hotel Pfister Wednesday evening, the Officers' Luncheon and College Alumni Luncheons on Thursday noon, and special clinics arranged in connection with the meeting were all unusually well attended.

THE GOLF TOURNAMENT

So much enthusiasm was displayed by our members who participated in the recent golf tournament that the event promises to be one of the attractive features of our annual meeting hereafter. About eighty physicians enrolled for the competition but somewhat more than one-third of the number were unable to be present. The

tournament was held on Tuesday, September 15th, on the beautiful Tripoli Country Club course near North Milwaukee. Numerous prizes were offered for the various events. The most coveted prizes are the President's cup and the Secretary's cup which are the property of the State Medical Society. They are to be awarded annually to the players making the lowest gross score and the lowest net score. These cups must be won three years in succession to become the permanent property of the winners. This year President Cunningham donated a beautiful trophy to the winner of the President's cup and the Secretary did likewise for the winner of the Secretary's cup. For the numerous secondary prizes, your committee wishes to express its indebtedness to the Roemer Drug Co., Kremers-Urban Co., E. H. Karrer Co., and the Victor X-Ray Co.

Dr. Chester M. Echols, Milwaukee, representing the golf committee, announced the winners and presented the prizes at our annual banquet. The winners and the prizes were as follows:

Low Gross Score—

1st prize, President's cup and Cunningham trophy—Dr. G. W. Stevens, Milwaukee. Score 89.

2nd prize, Wooden driver,—Dr. L. F. Jermain, Milwaukee. Score 93.

3rd prize, Silver Cocktail shaker—Dr. E. W. Miller, Milwaukee. Score 95.

Low Net Score—

1st prize, Secretary's cup and Crownhart trophy—Dr. C. W. Geyer, Milwaukee. Score 61.

2nd prize, Silver Cocktail shaker—Dr. J. Foster McNary, Milwaukee. Score 70.

3rd prize, Golf club—Dr. B. A. Hoermann, Milwaukee. Score 72.

Approaching and Putting Contest—

1st prize, Cigarette case and pocket book—Dr. F. A. Thompson, Milwaukee.

2nd prize, Golf club, Dr. S. M. Mollinger, Milwaukee.

3rd prize, Golf balls, Dr. E. W. Miller, Milwaukee.

For Birdies—

Dr. E. W. Miller, Dr. Vernon Chapman, Dr. E. X. Thompson, and Dr. M. L. Henderson, Milwaukee—Golf Balls.

For Eagles—

Dr. G. W. Stevens, Dr. G. I. Hogue, Milwaukee—Golf Balls.

Lowest Total on Holes No. 3, 7, 12, 14—

1st prize, Dr. E. X. Thompson, Milwaukee—\$7.50 worth of golf merchandise.

2nd prize, Dr. W. Hume, Dr. R. G. Sayle, Dr. G. I. Hogue, Milwaukee, and Dr. George W. Nott, Racine—Golf Balls.

Lowest Total on Holes No. 2, 8, 11, 16—

1st prize, Dr. C. W. Geyer, Milwaukee—\$7.50 worth of golf merchandise.

2nd prize, Dr. E. W. Miller, Dr. G. I. Hogue, Dr. W. T. Nichols, Milwaukee—Golf balls.

Fewest Putts on Eighteen Holes—

1st and 2nd prizes, Dr. G. W. Stevens, and Dr. C. W. Geyer, Milwaukee.

3rd prize, (Golf balls) shared by Dr. J. W. Powers, Dr. W. Hume, Dr. E. G. Henes, Dr. Roy Hansen, Dr. L. F. Jermain, and Dr. M. L. Henderson, Milwaukee.

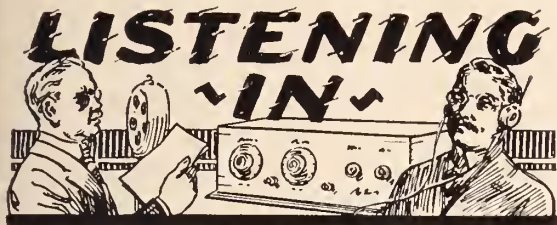
M. L. HENDERSON, *Chairman.*

G. A. CARHART.

F. A. STRATTON.

CHESTER M. ECHOLS.

Golf Committee.



"I got an insight as to why Wisconsin is blazing the trail in organized work," said Dr. F. C. Warnshuis, Secretary of the Michigan State Medical Society, who spoke at the Officers' Luncheon.

Wisconsin was honored by the attendance of another state secretary in the person of Thomas A. Hendricks, Executive Secretary of the Indiana State Medical Association.

Dr. Sidney S. Hall, Treasurer Emeritus, was to be found with his "pal" Dr. G. Windesheim of Kenosha. They sat side by side at the Speakers' Table at the Banquet.

Even though an unusually large attendance was anticipated, the last of the members' badges were taken late Thursday afternoon. And that hasn't happened before.

The Officers' Luncheon was again a complete success. Dr. Mauermann, genial secretary from Monroe, provided the officers with Monroe County Swiss cheese. "Than which there is nothing better."

The special exhibit of the Radiological Section of the Society won commendation time and again. The large view boxes were built specially for the meeting by Milwaukee members of the section and will be available for all future meetings.

Honors for traveling the greatest distance go to Dr. George Saunders of Superior, the sole representative of the Douglas County Society.

The surprise party announced for the Smoker caught the "surprise" entirely unexpectedly. Dr. Edward Evans, Chairman of the Council, presented Dr. O. B. Bock, Sheboygan, Chairman of the Committee on Public Policy and Legislation, with the surprise. Dr. Bock re-

ceived a framed bond copy of the Basic Science Law to which there was attached the pen with which Governor Blaine signed the bill. The pen was autographed by the Governor together with the number of the bill and the date.

President Cunningham set a fast pace for Presidents to come. He presided at every session of the House of Delegates and at each of the six scientific sessions besides giving the President's Address at the Banquet.

Every member of the Council was present at some time during the three day session and most of them were present throughout the sessions.

The Secretary was given unusual attention at the banquet when the presiding officer not only introduced him to the ladies present but added that he was still single.

Over seventy-five participated in the Golf Tournament held at the Tripoli Country Club on Tuesday preceding the scientific sessions. The announcement of the winners will be found elsewhere.

The Radiological Section held a luncheon meeting all its own on Friday noon and proceeded to adopt a constitution and by-laws and then elected officers. Dr. M. J. Sandborn, Appleton, was re-elected Chairman over his protests. Other officers selected were Dr. Gentz Perry, Kenosha, Vice-Chairman; Dr. C. W. Geyer, Milwaukee, Secretary-Treasurer, and as members of the Executive Committee Drs. C. R. Bardeen, Madison; Howard Curl, Sheboygan, and J. P. McMahon, Milwaukee.

The members of the Section accepted the invitation of Dr. Sandborn to hold the interim meeting in Appleton.

The special Friday program on subjects in the field of radiology brought several distinguished guests to the meeting. These included Dr. M. J. Hubeny, Chicago, Editor of Radiology; Dr. B. H. Orndorf, Chicago, Associate Editor, and Dr. Alden Williams of Grand Rapids, former president of the Radiological Society of North America.

And the many friends of Dr. L. H. Pelton of Waupaca were mighty glad to welcome him at the Smoker on Wednesday evening.

The Secretary has a bunch of keys, while Dr. O. M. Layton, Fond du Lac, reported the loss of a lady's small pocketbook believed to have been dropped at the banquet.

While Michigan has just announced the dropping of all exhibits, both scientific and commercial, for future meetings, Wisconsin is constantly increasing the number of exhibits each year. Our members have indicated their belief that a complete exhibit is of value. Such an exhibit presents the opportunity for the members to see and examine material which they contemplate purchasing in the future. The scientific exhibits are a valuable compliment to the scientific program.

One-Third Membership Attends Annual Meeting; Largest Registration in History of Society

MEMBERS

- Abelmann, T. C. H., Watertown.
 Ackley, S. B., Oconomowoc.
 Adamkiewicz, Jos. J., Milwaukee.
 Allen, L. L., Wauwatosa.
 Allen, S. C., Waterloo.
 Allen, Wm. J., Beloit.
 Altman, Maurice, Milwaukee.
 Altenhofen, A. R., Milwaukee.
 Amundson, K. K., Cambridge.
 Anderson, N. P., La Crosse.
 Armitage, J. E., Milwaukee.
 Arnold, F. W., Milwaukee.
 Avey, Sarah E., Milwaukee.
 Axtell, L. E., Marinette.
- Bach, J. A., Milwaukee.
 Bachhuber, A. E., Mayville.
 Baer, C. A., Milwaukee.
 Baird, J. C., Eau Claire.
 Baldwin, Geo. E., Green Lake.
 Balkwill, C. A., Gratton.
 Bannen, W. E., La Crosse.
 Bardeen, C. R., Madison.
 Bardenwerper, H. E., Milwaukee.
 Barlow, Roy A., Madison.
 Barnes, J. S., Milwaukee.
 Barth, G. P., Milwaukee.
 Bauer, F., Wauwatosa.
 Bauer, W. W., Racine.
 Bayer, W. H., Merrill.
 Becker, B. A., Silver Lake.
 Beebe, C. S., Milwaukee.
 Beech, Geo. D., Adams.
 Belitz, Alfred, Pepin.
 Bellack, B. F., Columbus.
 Bellin, J. J., Green Bay.
 Bennett, J. F., Burlington.
 Benson, G. H., Richland Center.
 Beust, M. von, Milwaukee.
 Boutler, W. F., Wauwatosa.
 Bickler, E., Milwaukee.
 Bill, Benj. J., Genoa Junction.
 Binie, H. A., Kenosha.
 Bird, M. D., Marinette.
 Bitter, R. H., Oshkosh.
 Black, N. M., Milwaukee.
 Blankinship, R. C., Madison.
 Bleckmann, W. J., Mendota.
 Blawett, M. T., Markesan.
 Blumenthal, R. W., Milwaukee.
 Blumer, Edward, Monticello.
 Bock, Otto B., Sheboygan.
 Boerner, R. W., Milwaukee.
 Bolton, E. L., Appleton.
 Boorse, L., Milwaukee.
 Bornstein, Max, Milwaukee.
 Borsack, K. K., Fond du Lac.
 Boyd, C. D., Kankana.
 Brah, A. J., Milwaukee.
 Braun, Robt. F., Milwaukee.
 Brey, P. F., Milwaukee.
 Brooks, L. M., Milwaukee.
 Brown, D. A., Madison.
 Brown, H. M., Milwaukee.
 Brown, J. F., Waupun.
 Brown, S. V. J., Milwaukee.
 Brunckhorst, F. O., Hortonville.
 Buck, G. C., Platteville.
 Buerki, R. C., Madison.
 Bunting, Chas. H., Madison.
 Burkhardt, E. W., Menomonee Falls.
 Burton, J. J., Milwaukee.
 Byrd, T. L., Milwaukee.
- Caffrey, A. J., Milwaukee.
 Cahana, Stephen, Milwaukee.
 Callahan, H. T., Spencer.
 Callan, P. L., Milwaukee.
 Cannon, H. J., Milwaukee.
 Carhart, G. A., Milwaukee.
 Caswell, H. O., Fort Atkinson.
 Cavany, J., Milwaukee.
 Chandler, F. E., Waupaca.
 Chandler, Jos., Pardsville.
 Chapman, V. A., Milwaukee.
 Charbonneau, A., Green Bay.
 Christensen, O. A., Hawkins.
 Christofferson, A. L., Kenosha.
 Churchhill, B. P., Milwaukee.
 Clark, J. F. W., Laona.
 Clark, W. T., Janesville.
 Coerper, E. E., Fredonia.
 Collins, W. P., Racine.
 Colucey, M. J. J., Madison.
- Comstock, Elizabeth, Arcadia.
 Connell, D. K., Beloit.
 Connell, F. Gregory, Oshkosh.
 Constantine, C., Racine.
 Cooksey, R. T., Madison.
 Coon, H. M., Stevens Point.
 Coon, W. W., Gays Mills.
 Copeland, Ernst, Milwaukee.
 Corry, F. M., Menasha.
 Couch, E. E., West Allis.
 Cox, A. M., Madison.
 Cox, L. M., Milwaukee.
 Crawford, A. S., Madison.
 Crikelair, F. L., Green Bay.
 Crone, Y. D., Beloit.
 Cron, R. S., Milwaukee.
 Cunningham, Wilson, Platteville.
 Cnrl. Howard, Sheboygan.
 Currer, P. M., Milwaukee.
 Cushing-Lippitt, Eleanore, Milwaukee.
 Cutler, J. S., Wauwatosa.
- Dallwig, E. L., Milwaukee.
 Dallwig, H. C., Milwaukee.
 Dana, A. C., Fond du Lac.
 Danforth, Q. H., Omro.
 Daniels, L. J., Milwaukee.
 Davies, R. E., Waukesha.
 Davis, C. H., Milwaukee.
 Dawson, D. L., Rice Lake.
 Dearholt, H. E., Milwaukee.
 Dehne, W. O., Appleton.
 Dennis, J. F., Waterloo.
 Devine, H. A., Fond du Lac.
 Dickerson, G. H., Milwaukee.
 Dieterle, J. O., Milwaukee.
 Dietrich, L. S., Medford.
 Doctor, John, Racine.
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Dr. E. F. Bickel, Oshkosh, Writes of Opportunity for Medical Observation in Berne, Switzerland

Berne, Switzerland,
August 22, 1925.

Dear George:

During the past year I remember reading several articles in the Journal by colleagues who stressed the opportunities for postgraduate study in Vienna and Paris. One hears comparatively little of the splendid medical center of Switzerland at Berne. For some weeks I have had the opportunity to observe the work here and I should like to express my appreciation of its excellence.

Among the physicians in Switzerland two figures stand out very prominently, namely, Profs. de Quervain and Wegelin. Both are indefatigable workers in their respective fields of surgery and pathology. Their departments for undergraduate study at the University of Berne are well organized, and opportunity is also given for private graduate workers to take shorter or longer courses.

The assistants speak and teach in good German and French, and some speak English very well. They are thorough workers having been well trained in their home institutions, and a few have studied in other countries. Dr. de Quervain's first assistant spent two years as Dr. Oshner's first assistant at Augustana. Dr. Willi Arnd, the first assistant in the Pathological Institute, is a splendid fellow, thorough and capable. His efforts to be courteous and to put instruction across are very gratifying. In his department one can follow on an average of about fifty autopsies per month. I am sure the subjects could get no more thorough sectioning in Prof. Erdheim's department at the Allgemine Krankenhaus.

In both of these departments there is being put forth united effort in the study of the goiter problem—an ever present source of economic waste in Switzerland. A good sized volume on the pathol-

ogy of this disease is now going to press from Prof. Wegelin's pen.

For years these workers have been carefully classifying histologically the anatomical specimens as they are daily coming from the operating room, and their close cooperation leads to a more intimate clinical understanding of this disease. Prof. de Quervain spends much time out of the operating room studying the life history of non-surgical patients, and otherwise healthy goiterous individuals. His own forms are used in public schools for physical examination of pupils and he takes much interest in the yearly summaries following the prophylactic use of iodine. I have a pamphlet of fifty-one pages given me by one of the Berne school physicians reporting the remarkably beneficial results of prophylactic measures during the past two years. They start their children at six years of age with a candy tablet containing .002 gm. iodine, giving it once a week for forty weeks. During the following years up to puberty they give this tablet once a month for ten months. At six years of age only 14 per cent show no goiterous enlargement. No community, where goiter is endemic, can afford to be without the proper knowledge of prophylactic medication, considering

the convincing statistics obtained both in our own country and here in Switzerland.

One day I visited with the Professor a Canton almshouse. They have 2,500 paupers in the Canton out of a population of 700,000; 700 of these are Cretins—two-thirds of whom have goiters, some most pronounced in size. One of the assistants had just completed a moving picture film showing the various grades of cretinism and also demonstrating how these good natured simpletons can be made self-supporting by fitting them into various occupations. On another day I was introduced to the Professor's library, in his beautiful villa overlooking the Bernese Alps. It is said to have the largest collection of reference work on goiter in Europe. There are many English and American pamphlets and volumes in it, as is not the case in many other foreign libraries.

Recently I have come across this word "Begeisterungsfähigkeit" Enthusiasm. The context in which it was placed seemed to refer to a spirit that makes others enthusiastic. The term describes the side of these Swiss workers that appeals to me.

Sincerely,

E. F. Bickel.

Hospitals in Wisconsin; A Historical Survey, 1816-1925

BY CHARLES R. BARDEEN, M.D.,

Dean of the University of Wisconsin Medical School

(Continued from September.)

In 1857 the city of Milwaukee donated three acres of land out of poorhouse property to the Sisters of St. Joseph's and after much difficulty in raising funds from private sources a small building was erected in 1858-9. This was the beginning of the present fine St. Mary's Hospital of that city. See Fig. 3. Between the years 1862 and 1872 the State contributed a total of \$15,350 toward its support and development in annual sums ranging between \$500 and \$4100. In part the State support given at this time appears to have been due to provisions made for caring for veterans of the Civil War. No state aid was subsequently given this institution. By 1872 the value of lands and buildings was \$30,000. During the next decade there was no marked growth. The annual expenditures averaged less than \$8,000, the daily average number of patients less than 40. The main receipts came from the federal govern-

ment for the care of seamen. The patients were all poor but some were able to pay something toward the cost of care. In 1878, for example, receipts for care of marines were \$3,731.75, from pay patients \$2,618.99 and there was a deficit of \$1,542.45.

Meanwhile a few other general hospitals sponsored by charitable organizations struggled into existence. In 1863 the Rev. W. A. Passavant of Pittsburgh, Pa., organized the Milwaukee Hospital. This was placed in immediate charge of the Order of Protestant Deaconesses of Pennsylvania. Passavant, though continuing to reside in Pittsburgh, acted as manager and appointed a local board of trustees. He became personally responsible for the purchase of land and buildings, which cost originally \$12,000, but he was subsequently reimbursed by subscriptions from Milwaukee citizens. This hospital had a hard time

in its early days. Between 1865 and 1872 the State contributed \$7,500 toward its development and support in annual sums ranging from \$500 to \$4,000. The value of land and buildings was estimated at \$17,000 in 1872. No subsequent state contributions were made.

This hospital was not so fortunate as to have a steady source of income, like that of St. Mary's, from the federal government. About two-thirds of the patients paid nothing, the others paid up to \$5.00 per week. During the year 1871-72 care was given to 152 patients. The daily average number of patients at this time must have been quite small, probably not over 10, although with crowding the hospital could accommodate from 40 to 50 patients. It cared for patients that other institutions refused. Thus in 1872 it was the only institution in Milwaukee willing to care for smallpox patients. Fifty-two such patients were cared for that year. For 46 the city paid the hospital one dollar per day. The other six patients paid for themselves. During the following decade this hospital failed to grow. In the year 1880-81 only 138 patients were cared for. The Rev. Passavant, its philanthropic founder, residing in Pittsburgh, could not give it the attention it needed to attract public support. The Deaconesses in charge appear to have become nearly overwhelmed by the burden of conducting a charitable institution in which the public took so little interest. In the eighties a revival took place and from this humble institution has developed the present well-known Passavant Hospital. See Figs. 5 and 6.

In 1875 St. Luke's Hospital was opened in Racine under Episcopalian auspices. This hospital received from the state \$500 for each of the first two years of its existence. These appear to be the last of state contributions toward the support of general hospitals under private management. Although this hospital was supposed to have a capacity of 18 to 20 hospital beds, there appears to have been at most times but little demand for its services. During the year 1880 but 18 male and 4 female patients were cared for there and only one patient was in the building when it was inspected for the State Board of Charities in 1880. The hospital was open to charity patients and to patients who could pay but \$5.00 per week. Today it is a thriving insti-

tution under the auspices of the Alice Horlick Memorial Hospital Association.

Meanwhile about 1870 at the site of the county poorhouse in Wauwatosa a special building was erected for general hospital purposes. The report of the State Board of Charities for 1871-72 state that "The hospital building has been recently erected and is convenient and well managed and adapted for the purposes for which it is designed." It contained 34 two-bed rooms.

The report of the State Board of Charities for the year 1885-86 states that the Milwaukee County Hospital was the only publicly supported hospital in the state at that time. "Elsewhere the poorhouse and even the jail served as hospitals. We welcome the increase of hospitals as benevolent institutions which charge a moderate rate from those able to pay and receive free of charge those unable to do so." This report gives a list of nine hospitals of this character established subsequent to the three institutions mentioned above. The development of general hospitals which began in the eighties and has rapidly increased since that period has been due in the main to the increasing specialization which has characterized the general social development in recent years and which has affected the care of the sick as well as all other social activities. In the seventies nearly every physician was a family practitioner although there were a few who did more or less surgery. Soon after the Civil War, Governor Fairchild appointed C. E. Houghten to take charge of the eye and ear department for indigent soldiers at St. Mary's Hospital. Subsequently Houghten helped to establish an eye and ear infirmary in Milwaukee in 1870. Medical specialists were, however, rare in those days, but in the eighties became more common and have continued to increase rapidly in relative numbers. At present nearly twenty per cent of the approximately 3,000 physicians in the state announce themselves as specialists in one branch or another of medicine, although much less than half of these confine their work to the given specialty. Specialization in medicine has been facilitated by the growth of cities, and by improvements of railroads and highways and methods of transportation, including recently, first the electric lines and then the motor car and motor bus. The improvements in method of transportation and the telephone have made it easier than of old for the physician



ST. MARY'S HOSPITAL 1859



Milwaukee Hospital, 1863—"The Cradle"



ST. MARY'S HOSPITAL 1909



Present Milwaukee Hospital Grounds

Top, left: The original building of St. Mary's Hospital, Milwaukee. The main part of the building, at the right, was completed in 1859, the left wing was completed in 1884. The whole building was torn down in 1911.

Bottom, left: The present building of St. Mary's Hospital, Milwaukee, as it appeared immediately before occupancy.

Top, right: The Milwaukee Hospital, 1863.

Bottom, right: The present Milwaukee Hospital grounds. The building at the right is the Layton Home for incurables. The main part of the hospital building at the left was built in 1884. The Annex in 1913.

to attend the patient in his home. They have even more greatly facilitated the patients' visit at an office or clinic and his transportation to a hospital.

The first general hospitals in the state were, as we have seen, established by religious organizations for the charitable care of the sick. The nursing was done by members of Sisterhoods devoted to this service. The Sisters received in return merely meager shelter, food, and clothing and the gratitude of those who understood their work. They merely desired to serve the sick poor and took in patients suffering from contagious and infectious diseases as well as others. To some extent they received payment from city or county for the care of those unable to pay but the sum thus received was insufficient to pay the necessary overhead, small as this was. Rooms were provided for those who could pay something toward the cost of their care. At first merely the homeless as a rule took advantage of this. Then these hospitals began to limit their care to patients whose presence was not likely to cause disease in

others or to disturb their comfort. They were made more attractive to those who could afford to pay for cost of care. Physicians ambitious to practice surgery took advantage of this. Major surgery can be done in a home under great disadvantage. A hospital with facilities for operating and with Sisters experienced in aiding in the operating room and attending patients following operations facilitated surgical operations. Furthermore, it is much easier for numerous patients needing operations to come to a central well-equipped hospital than for a surgeon to transport the equipment and attendants necessary for operations to numerous homes.

The surgeons therefore encouraged the establishment of hospitals which offered facilities for surgical operations and which limited the class of patients received to those whose presence would not be dangerous to their patients. Where such hospitals were established the surgeon would send patients able to pay liberally for care in private rooms as well as the surgeon's fee. In return for this service the surgeon was glad to attend free of

charge patients who could pay neither the hospital nor the surgeon. The income from private patients enabled the Sisters to increase the amount of this charity work although the relative amount of this work decreased as well-to-do patients became more willing to go to a hospital for care. Public-spirited citizens were appealed to for contributions for erecting hospitals both for the sake of furnishing hospital care for the poor and for the sake of having at hand an institution to which anyone could go in time of need. The larger and wealthier cities were naturally those in which this type of hospital development first took place. In 1885 there were three denominational hospitals in Milwaukee, two in Racine, one at La Crosse, one in Ashland, two at Chippewa Falls, and one (short lived) at Madison. Of these ten hospitals all but two were under Catholic auspices. By 1900 there were 19 general hospitals under the charge of Catholic Sisterhoods, by 1924, there were 33, with a total capacity of over 3,350 beds.

Although the second general hospital established in the state was in charge of a nursing order of Protestant Deaconesses, the main development of general hospitals under Protestant auspices has been since training schools for nurses have been established in the state. There were in 1924 ten general hospitals under Protestant auspices and one under Hebrew auspices. Of these all but two have been established since 1899 and of these nine but three are under the auspices of Deaconesses. The eleven hospitals provide about 1100 beds.

The development of surgery in recent years is due in no small part to the use of aseptic methods. The operating room as the cleanest of places is essentially a modern institution. In Milwaukee as late as 1894 it is stated that the practice of anything like aseptic surgery was in its infancy. "There was no operating room in any hospital that could by any stretch of the imagination be considered to be entirely suitable for the newer idea and to furnish such facilities to the profession of the state." To have operating rooms of this kind it was necessary not only to build them but also to train nurses to have a technical skill which had not been demanded of nursing Sisterhoods of earlier days. Furthermore, there was a demand for a much greater number of nurses both within and without the hospital walls than could be supplied by women willing to give up all for a life of

unrequited service of the sick. Thus arose the training schools for nurses, the first of which in this country was established at New York in 1870. The first training school in Wisconsin was organized in Milwaukee in 1888 under private philanthropic auspices. It was called the Wisconsin Training School for Nurses. Academic instruction was offered young women who desired to take up nursing and practical instruction was given by hospitals with which the school became affiliated. Subsequently, most of the larger and some of the smaller hospitals of the state have established training schools of their own. The Wisconsin Training School was taken over by the Lake Side Hospital in 1902. Since 1911 the state has registered nurses graduated from approved training schools. At present nurses desiring registration have to pass a special examination conducted by a committee under the State Board of Health. This committee establishes standards for schools, the graduates of which are recognized as qualified for examination and registration.

We have seen above that the United States Census for 1880 gave a ratio in Wisconsin of one nurse to each 5,626 of the population. For 1900 the census gives 184 trained nurses, 1,747 unclassified women nurses, and 266 unclassified men nurses and 227 midwives, a total of 2,197, or approximately one to each 1,000 of the population. The United States Census of 1920 gives 3,323 trained women nurses, 59 trained men nurses, 2,845 unclassified nurses, and 90 midwives, a total of 6,227, or approximately one in each 423 of the population. Among the unclassified nurses given above are doubtless many pupil nurses in the training schools. The relative number of "nurses" listed in the census returns has increased over 13 times in the last 40 years. Meanwhile the number of physicians relative to the population has not varied greatly. In 1880 it was one to 1,100, in 1900 one to 831 and in 1923 one to 950.

The aim in establishing training schools for nurses was, on the one hand, to supply good care for the sick in the hospitals, and, on the other hand, to provide competent nurses for patients in their homes. The prices charged by nurses for private duty are, however, so high as to place them beyond the means of families of limited income and one of the problems still to be solved is to furnish adequate nursing aid to such families. In some cities the municipality or a private benevolent

association has undertaken to employ nurses to visit homes where there are patients and to give such special service as may be required, instruct the members of the household as to how to make the patient comfortable and charge a fee to cover the cost of service if this can be paid. Trained nurses are being employed in increasing numbers for aid in the care of the health of the children of the public schools and these nurses often give valuable aid where children are sick at home. The county health nurses under the supervision of the bureau of child welfare and public health nursing give aid and expert advice in rural districts and are sure to be employed in even greater numbers as their value comes to be more appreciated.

Trained nurses and training schools have made possible the development of hospitals under secular auspices. Previous to the establishment of training schools it was difficult to secure good attendants for the sick except in institutions in charge of nursing Sisterhoods. The members of these Sisterhoods were not at that time trained in modern technical methods but they gave a kindly care and devotion difficult to secure from others. Since then they have adopted more and more the newer technical methods and have established training schools in the larger hospitals under their control. The graduates of training schools, under secular or denominational auspices, who have executive ability and a liking for instructional work, have not only organized the nursing service, with or without a training school, in hospitals under secular control but they have in many instances become superintendents of hospitals.

General hospitals under secular control are of three types: public, benevolent, and private. The public hospital is one under direct state, county, or municipal control. The benevolent hospital is one directed by a private board of trustees or association for general public interest but not for profit. The private hospital is one managed by those who have a pecuniary interest in its welfare.

It is not easy to draw a sharp line between the three types of institutions or between them and hospitals under denominational control. There is no money to be made from maintaining a general hospital. If large charges are made for rooms the patients expect a corresponding service. Money may, however, be made by physicians and surgeons who send patients to general hospitals. While such earnings are usually well deserved, a

hospital managed with a view of promoting such earnings is essentially a private institution. A hospital maintained solely for care of charity patients never long maintains high standards. Such patients lack friends of influence to take an interest in seeing standards are maintained. On the other hand, pay patients usually have friends who see to it that the patient is well cared for and at the same time help to maintain standards for those who do not pay for their care. It is the pay patients in our state and county hospitals and asylums for the insane and our sanatoriums for the tubercular who help to keep high standards there. In public hospitals admitting only charity patients there are usually found alternating periods of depression and reform. If such a hospital is used for teaching purposes a high level is much more easily maintained than otherwise but not so easily maintained as when some pay patients are admitted, though there be few in number.

In a general hospital much skilled medical and surgical service is now called for. If pay patients are admitted to such a hospital and can afford to do so they should pay not only for room, care, and nursing but also for the expert professional medical service. Otherwise, physicians could not afford to qualify for this service in private practice and the public would suffer. Thus a hospital may be run solely for the public interests and yet have on its medical staff men who receive fees from patients in the hospital. The question as to whether or not a hospital is essentially a private hospital can be determined rather from the spirit than the form of its management. In the classification of hospitals given below and in Table I, available data have been utilized according to the judgment of the writer but another might differ in point of view.

The first general hospital in the state under secular control was the Milwaukee County Hospital established in 1870. This building burned in 1880 and a new one was erected in 1880, and is still in use, with a present capacity of about 300 beds. The next general hospital to survive under secular control was established in 1888, the Johnston Emergency Hospital, in Milwaukee. This hospital gives medical care free in cases of emergency. It was established under the auspices of a benevolent organization and later its support was undertaken by the city. It has about 40 beds.

Since 1898 there have been established three county and two municipal hospitals with a total capacity of about 135 beds, 15 hospitals under the control of secular benevolent associations with a total of about 875 beds and 37 private hospitals with a total of about 750 beds.

The general hospitals in this state under denominational or secular control have, as stated above, been developed in their present form chiefly in response to the demands of surgeons for proper facilities for major surgery. Obstetrics is becoming more and more recognized as a surgical specialty calling for hospital care. The development of laboratories and facilities for newer methods of diagnosis and treatment of cases of serious illness has made the modern hospital of increasing value in the treatment of cases requiring medical rather than surgical treatment. Expert nursing can be supplied much more economically in a hospital than in a home. Although the general hospitals of the state today care in the main for surgical cases, they are likely in the future to be relatively more used than at present for medical care.

The development of general hospitals has been in the main greatest where the growth of cities has been most rapid. A convenient way of expressing hospital capacity is to state the number of beds available for patients. There are in round numbers, outside of federal and state hospitals, about 6,300 hospital beds in general hospitals in this state, if we include in these children, maternity and surgical hospitals but exclude sanitariums. Of these hospital beds about 25 per cent are in Milwaukee County and about 10 per cent are in the other large cities on the shores of Lake Michigan, about 15 per cent are in the large cities on Lake Winnebago, the Fox River and Green Bay. About 7 per cent are in the two large cities on Lake Superior, 15 per cent in the large cities of the western part of the state in the Chippewa valley and on the Mississippi, 7 per cent in the larger cities of the north central part of the state in the valley of the Wisconsin and its tributaries, 10 per cent in the larger cities in the southern part of the state on the Rock River and its tributaries, about 2 per cent in cities lying in the watershed of the lower half of the Wisconsin river and 2 per cent in the southwestern part of the state. The rest are scattered but in the main are situated in

the smaller towns in the districts in which the larger cities are situated, one per cent in the valley of the Wolf, 4 per cent in the western part of the state, and one per cent in the north central region.

Thus the eastern, the extreme northern, the western, the southern and the central parts of the state have a fair supply of hospital beds, although in none of these regions is the supply wholly adequate and expansion is taking place as resources permit.

In the districts between the regions mentioned there are either no hospitals or merely small private hospitals for general care or surgery.

While much good work may be done in a small hospital there are numerous conditions which require elaborate apparatus for diagnosis and treatment and a staff of specialists who are skilled in its use. For this a large hospital or clinic is required. Of the 32 general hospitals of 70 beds or more in the state, 8 are in Milwaukee, 2 in Racine, one in Kenosha, one in Manitowoc, one in Sheboygan, one in Fond du Lac, one in Oshkosh, one in Appleton, 2 in Green Bay, 2 in Superior, 2 in Ashland, one in Chippewa Falls, 2 in Eau Claire, 2 in La Crosse, one in Tomahawk, one in Wausau, one in Marshfield, one in Janesville, and 2 in Madison. While better equipment, better management, and better technical skill may be sometimes found in a small hospital than in a large one, a large hospital offers opportunities for a variety and elaboration of equipment not justified in a small one. In a large hospital with a great variety of patients equipment may be in constant use which would not be needed more than once or twice a year, if at all, in a small hospital.

As a rule the larger hospitals with good laboratory and library facilities and a well-organized medical staff are preferred for giving the young medical graduate special training before he enters into private practice. Some states require that a physician have an internship of this character before being permitted to take an examination for a license to practice medicine. The American Medical Association publishes from time to time lists of hospitals approved for internships. The last list was published in 1923. In this list for Wisconsin, six hospitals in Milwaukee County, one in Ashland, one in Fond du Lac, one in Oshkosh, two in La Crosse, one in Marshfield, and one in

Madison, were approved for intern service. Since that date a number of other hospitals have been approved.

From what has here been stated relative to the distribution of hospitals in the state it is obvious that while there has been considerable hospital development in certain parts of the state there are large areas without hospitals and other areas in which hospital facilities are very limited. We may expect to see in the future a wider diffusion of small hospitals designed to meet ordinary local needs adequately but not attempting to do more than can be well done. Patients who need more elaborate equipment may then be sent to the larger hospital centers for care. The Wisconsin General Hospital should cooperate with the other hospitals of the state both small and large in helping to maintain high standards and should be expected to take a lead in developing useful methods of treatment.

While general hospitals in the state have thus far been developed largely in response to the demands of surgeons there has been some development of institutions designed primarily for medical care. There are many individuals who as a result of inheritance, acute disease, bad hygienic habits, accidental injury, or other cause, exhibit constitutional weakness in some of the vital organs, such as the heart, kidneys, or digestive system. Patients of this kind are frequently benefited by more or less institutional care and the use of special forms of therapy. To meet the needs of this class of patients sanatoriums have been established, where the surroundings are pleasant and often where the water is supposed to have special virtues. In this state Waukesha, Oconomowoc and Prairie du Chien have been favorite sites. There are at present in the state 13 such institutions with a total of 875 beds. Of these the oldest dates back to 1875, the next to 1888. Three more were established before 1900 and eight since that date. While the charges in these institutions are as a rule moderate for the service given, the length of time usually required for



Wisconsin General Hospital, Madison. In the immediate background at the right lies the Chemistry Building, at the left the Physics Building and behind this, the Biology Building. In the immediate foreground at the left lies the Student Infirmary and the Bradley Memorial Hospital. The Nurses' Home is being erected near where the small cottages are shown in the lower right hand corner of the picture. It is planned to erect medical laboratory buildings back of the Hospital opposite the Physics Building.

effective results places them beyond the means of the average individual. Lack of endowment makes it impossible to extend care to any large number unable to pay for such care. Where there is a city or county hospital for the indigent, individuals of this type usually drift in too late for effective treatment, were up-to-date facilities available. In such institutions they seldom are, and the patient becomes one of the "chronics" who fill so many beds in these institutions. Probably for no other class of patients could more be done than for these were good diagnostic facilities available to the family physician before the condition passes the state where it can be benefited. A patient of this type sent to a hospital for study and then returned to the family physician for treatment at home with a statement of the result of the study and advice as to care may frequently be restored to years of active life. There are many who believe that the trend of the times has been rather too much in this direction of specialization, that the family practitioner with a personal interest in his patient and his surroundings can do much that the specialist with his more impersonal point of view cannot do, and that while the help of the specialist is needed he can accomplish the most good by working in cooperation with the family practitioner.

(Continued on Page 284.)

THE JOURNAL BOOK SHELF

The Cornell Clinic, 1921-1924. Medical service on a self-supporting basis for persons of moderate means. A report issued by the Committee on Dispensary Development of the United Hospital Fund of New York, Michael M. Davis, executive secretary. April, 1925. New York City.

Lectures, Clinics and Discussions on Electro-Physiotherapy. Held at Logan Square Masonic Temple, Chicago, October 20 to 24, 1925, under the auspices of H. G. Fischer & Company, Inc., Chicago.

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Personal Hygiene Applied. By Jesse Feiring Williams, M.D., Prof. of Physical Education, Teachers College, Columbia University, New York City. Second edition revised. 12mo of 414 pages, illustrated. W. B. Saunders Co., Philadelphia and London, 1925. Cloth, \$2.00, net.

Clinical Medicine for Nurses. By Paul H. Ringer, A.B., M.D., Chief of Medical Service of the Asheville Mission Hospital, Asheville, N. C.; on staff of Biltmore Hospital, Biltmore, N. C. Illustrated. Second revised edition. Price, \$2.50. F. A. Davis Company, Philadelphia, 1924.

A Textbook of Practical Therapeutics. With special reference to the application of remedial measures to disease and their employment upon a rational basis. By Hobart Amory Hare, B.Sc., M.D., LL.D., Prof. of Therapeutics, Materia Medica, and Diagnosis in the Jefferson Medical College of Philadelphia. Nineteenth Edition. Enlarged, thoroughly revised and largely rewritten. Illustrated with 144 engravings and 8 plates. Price, \$7.00. Lea & Febiger, Philadelphia and New York, 1925.

Practice of Pediatrics. By Charles G. Kerley, M. D. Formerly Professor of Diseases of Children, New York Polyclinic Medical School and Hospital, and Gaylord W. Graves, M. D., Associate in Diseases of Children in the College of Physicians and Surgeons, New York City. Third Edition, revised and reset. Octavo of 922 pages, 150 illustrations, Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$9.00 net.

A Compend of Gynecology. By William Hughes Wells, M. D., Late Asst. Prof. of Obstetrics in the Jefferson Medical College; Asst. Obstetrician in the Maternity Dept. of the Jefferson Medical College Hospital. Fifth Edition, revised and enlarged, with 167 illustrations. Price \$2.00, net. P. Blakiston's Son & Co., Philadelphia.

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Old and New Viewpoints in Psychology. By Knight Dunlap, Prof. of Experimental Psychology in the Johns Hopkins University, Baltimore; Formerly President of American Psychological Association. Price, \$1.50. C. V. Mosby Company, St. Louis, 1925.

The Faith, the Falsity and the Failure of Christian Science. By Woodbridge Riley, Ph.D., Member of the American Psychological Association; Lecturer at the Sorbonne, 1920; Author of "American Thought from Puritanism to Pragmatism;" Frederick W. Peabody, LL.B., Member of the Massachusetts Bar; Author of "The Religio-Medical Masquerade;" Charles E. Humiston, M.D., Sc.D., Prof. of Surgery, College of Medicine, University of Illinois. Fleming H. Revell Company, Chicago.

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Methods in Surgery. By Glover H. Copher, M.D., Instructor in Surgery, Washington University School of Medicine. Including outlines for case history-taking, preoperative and postoperative care of patients. rou-

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Symptoms of Visceral Disease. By Francis Marion Pottenger, A.M., M.D., LL.D., F.A.C.P., Medical Director, Pottenger Sanatorium for Diseases of the Lungs and Throat, Monrovia, Calif. A study of the vegetative nervous system in its relationship to clinical medicine. Third edition with eighty-six, text illustrations and ten color plates. Price, \$6.50. C. V. Mosby Company, St. Louis, 1925.

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Eye, Ear, Nose and Throat Manual for Nurses. By Roy H. Parkinson, M.D., Visiting Oculist and Aurist to St. Joseph's Hospital, San Francisco, Calif. Illustrated. C. V. Mosby Company, St. Louis, 1925. Price, \$2.25.

Ocular Therapeutics. By Dr. Ernst Franke, A.O., Prof. of Ophthalmology and Chief of the Second Eye Clinic at the University of Hamburg. Translated by Clarence Loeb, A.M., M.D., Oculist to the Michael Reese Hospital, and head of the Department of Ophthalmology of the Michael Reese Dispensary, Chicago, Ill. A manual for the student and the practitioner. Price, \$3.50. C. V. Mosby Company, St. Louis, 1925.

Allergy, Asthma, Hay Fever, Urticaria and Allied Manifestations of Reaction. By William W. Duke, Ph.B., M.D., Kansas City, Mo. With seventy-five illustrations. Price, \$5.50. C. V. Mosby Company, St. Louis, 1925.

HOSPITALS IN WISCONSIN

(Continued from Page 281.)

The state now exacts higher educational standards for those who wish to practice medicine than for any other profession. It requires more active cooperation for the public welfare from the medical than from other professions. Thus, for instance, every physician is obligated to report births, deaths, and certain diseases and deformities coming within his field of work and is thus an officer of vital statistics. In order to facilitate the work of the family practitioner the state through the central and branch laboratories of the State Board of Health and the laboratory of the State Board of Control (the Psychiatric Institute) now provides a valuable laboratory service free of charge. Through the Extension Division of the University it provides extension courses and pamphlet libraries to aid the physician to keep in touch with medical progress. For the same purpose medical books are loaned physicians from the

University Library. The Medical School of the State University offers special courses for physicians when new methods appear, as recently in case of insulin. The State General Hospital is designed primarily to furnish special laboratory facilities and special treatment and care to patients unable otherwise to obtain such care and every effort is made in this service to work in cooperation with the family physician. Preventative medicine has taken from the family physician a large proportion of the cases on which he formerly depended for support. Preventative medicine has been unable thus far to do much for constitutional diseases of the type referred to above. It is not likely to do this unless the family practitioner becomes essentially a practitioner of preventative medicine. The best way for the public to obtain this most valuable of services is to reward it. The dentist gets more for keeping teeth fit than for pulling them. The physician should be similarly rewarded for keeping the body fit.

SUMMARY

In Table I there are shown the number of institutions for the care of the sick in the state, the number of patient beds in these institutions, the types of disease for which various institutions are in the main designed and the various types of control. The figures given are merely approximate since hospital facilities are developing so rapidly that it is difficult to get exact figures. In the main, data furnished in the last Directory of the American Medical Association and in the Hospital Number of the Journal of this association for January 12, 1924, have been utilized, but where possible more recent data have been added. The figures do not include small infirmaries or hospitals for the convenience of institutions such as reform schools or orphan asylums, nor do they include beds in homes for the aged. On the other hand they include the schools for the feeble-minded and asylums for the chronic insane.

According to the figures given there are about 22,225 hospital beds in the state of which 1,325 are under federal control. Of these 550 are for veterans suffering from tuberculosis, 250 for veterans suffering from nervous and mental diseases, and 450 for inmates of the National Soldiers' Home. The federal government also

(Continued on Page XXVI.)

MADISON NEUROLOGICAL CLINIC

First Central Building
Madison, Wisconsin

The work of this Clinic is limited to neurology, psychiatry, syphilis, cardiac and endocrine disorders.

The service is both diagnostic and therapeutic.

Syphilis in all its phases, especially late manifestations and syphilis of the central nervous system, will be treated. Limited hospital facilities for this purpose are available at Madison.

Metabolic and cardiac disorders will receive special attention.

Our diagnostic service includes psychoneuroses, psychoses, conduct and behavior disorders in children.

The Clinic is equipped to render special service in the following diagnostic methods:

SEROLOGICAL examination
DARK FIELD examination
LUMBAR PUNCTURE
ELECTROCARDIOGRAPHY

BASAL METABOLISM
CARDIAC FLUOROSCOPY
BLOOD CHEMISTRY
DERMATOLOGY

After careful study, a complete detailed report with conclusions and suggestions for treatment will be submitted to the physician who refers the case.

Examination by appointment only.

W. F. LORENZ, M. D., *Chief Consultant*
W. J. BLECKWENN, M. D.

F. J. HODGES, M. D.
R. L. McINTOSH, M. D.

The Management of an Infant's Diet

Summer Diarrhea

Mellin's Food
Water (boiled, then cooled)

4 level tablespoonfuls
16 fluid ounces

This formula provides a means of supplying the principal fuel utilized in the body for the production of heat and energy and furnishes immediately available nutrition well suited to protect the proteins of the body, to prevent rapid loss of weight, to resist the activity of putrefactive bacteria, and to favor a retention of fluids and salts in the body tissues.

While the condition of the baby will guide the physician in regard to the amount and intervals of feeding, the usual custom is to give one to three ounces every hour or two until the stools lessen in number and improve in character. The food mixture may then be gradually strengthened by substituting one ounce of skimmed milk for one ounce of water until the amount of skimmed milk is equal to the quantity of milk usually employed in normal conditions.

Mellin's Food Co., 177 State Street Boston, Mass.

OH, DOCTOR, DOCTOR!

By H. A. J.

The town of Elsinore in Denmark has been engaged for some years in the quiet but remunerative task of exhibiting relics of its greatest son, who is, of course, Hamlet. As far as strict historical accuracy goes, the castle of Kronburg and the pyramid supposed to be the grave of Hamlet are both some centuries younger than the prince who inhabited first the one and then the other. A certain Mr. Johannes Jensen, a native, but probably not a stockholding native of Elsinore, thinks that this deception of gullible tourists is "unworthy of a cultured nation." Well, perhaps it is, but a strict regard for truth would also be an infraction of the sight-seer's inalienable right to get full value out of every antiquity.

Tourists are not a sceptical race—in fact they would rather carry away one good whopper about a ghost in an old castle than any quantity of statistics on the textile industry of the town near it. Whether or not the tourist believes all he hears is not the point. He likes to feel that the chair he sat in in a certain house in Stratford is the identical one used by Shakespeare, and even when he gets back home and is told that the chair couldn't possibly have been anything more than a duplicate, he may make an outward, shame-faced bow to truth, but in his heart of hearts he will still believe.

If Europeans are scornful, or like Mr. Jensen, pitiful of the too-credulous American traveler, we take our revenge when some Englishman, bolder than his countrymen, risks the perils of travel here. Once he leaves the comparatively safe precincts of New York he is fair game for a choice collection of natural history anecdotes and tales of he-men—all about the marvelous side-hill gouger, the extraordinary intelligence of hop-toads, and the exploits of David Crockett. These exuberant fabrications are put forth with a sincerity worthy of complete confidence, and their acceptance is the more remarkable because the stories are not attached to anything tangible. People will believe almost any story about whaling if you let them hold an old shark's tooth in their hands while you tell it. How much more wonderful then, is the story which depends for its success

merely upon the frank and ingenuous manner with which it is told, and is it strange that Americans raised in the tradition of Mark Twain should expect, even demand similar improvisations when they go abroad? For my part I think they are entitled to a full crew of ghosts and princes for every castle.

But it is not even necessary to go abroad for legends—we furnish excellent examples right at home. None of the beds in which Washington slept have ever worn out, and each one seems to have the property of infecting all neighboring beds with the same aura of greatness. Then there is that curious business of Lief Ericson. Longfellow, with a hastiness which did credit at least to his heart, wrote "The Skeleton in Armor" under the inspiration of a two hundred year old tower. As if this were not enough, he composed "The Wreck of the Hesperus," which has made many a maiden lady weep over the sad fate of the skipper's little daughter. To be sure there was a wreck on the reef of Norman's Woe about that time, but "It was *not* the schooner Hesperus which sailed the wintry sea," to paraphrase the poet. The Hesperus was safe in Boston harbor throughout the storm, and investigation has further discovered that the little daughter whom the skipper lashed to the mast was a pure flight of fancy on the part of Mr. Longfellow. The rather chauvinistic advertising motto of the railroads might well be changed to "Believe America First." After a course in Longfellow's poetry and Washington's beds, Europe can be swallowed without a gulp.

Federal Men and Police Active in a Renewed Drive: One Saloon Visited 13 Times.—Headline in Milwaukee Journal.

As the Scot Tissue people say: "Meet Mr. Thirsty Fibre."

A SIMPLE METHOD OF CAUTERIZATION OF THE CERVIX

Samuel F. Abrams, St. Louis (Journal A. M. A., August 8, 1925), asserts that the cautery method of treatment is the method of choice in lacerations and inflammatory cervical lesions. The method described is simple, efficient and universally accessible. The results, with the method properly applied, are excellent. There is no cervical dystocia following its use.

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A Debt of Gratitude

TO THE MEMBERS OF THE STATE MEDICAL SOCIETY OF WISCONSIN:

The year is nearing its end and the time has arrived when it is wise for us to invoice our year's work. In this I hope we may not compute in a business way of dollars and cents alone, but that we may consider our professional achievements and that we may add much from the feeling of satisfaction that services have been well rendered and that we have been able to alleviate suffering, prevent sickness, and thereby to postpone death. As we review the work of one year after the other, we find that of all the branches of medicine, the one of preventive medicine is steadily and consistently demanding more and more of our time and attention and receiving greater appreciation by the public. And rightly so, for what greater satisfaction can there be than the knowledge of having successfully prevented the entrance of sickness or death into a family or community?

The death rates of smallpox, typhoid fever, diphtheria, yellow fever, and tuberculosis all show wonderful results obtained by scientific application of preventive measures. Of these diseases, tuberculosis is the only one that does not have a specific scientific means of prevention. Of the great plagues, that of tuberculosis must still depend more or less upon the education of the public for combat. Because its prevention is so largely a matter of education, the fight of the medical profession has been taken up by organizations closely allied to medicine that are prepared and equipped for this purpose.

In Wisconsin, we are, indeed, fortunate in having a splendid organization to carry on our battle with us. We of the medical profession have a true ally in that most efficient and effective philanthropic agency, the Wisconsin Anti-Tuberculosis Association. Because of the splendid cooperative spirit shown by this Association, the medical profession owes the Association a debt of gratitude and the coming Seal Sale for funds offers the opportunity for us to show our appreciation of the efforts and accomplishments of this Association. Every physician of Wisconsin is in a splendid position to be of real help in this preventive work and it is my sincere hope that you will all make it a direct and personal obligation to help in making the 1925 Seal Sale of the Association a most successful one so that we, as well as the people of Wisconsin, may continue to see the benefits of the work which the Seal Sale finances.



President, State Medical Society of Wisconsin.

General Biologic Considerations*

BY M. F. GUYER, Ph.D.,

Department of Zoology, University of Wisconsin. Secretary, State Board of Examiners
in the Basic Sciences

Mr. President, Members of the State Medical Society: I have been set the duty of administering to you a cerebral stimulant—or, as you please, a hypnotic—which in thirty minutes will make you grasp the essentials of the science which deals with every thing that pertains to life—biology. The humor of the situation is so evident that I will not even stop to apologize for my foreordained failure. With your kind forbearance, however, I shall briefly review what is not only familiar but probably trite biological information to you, that I may use it as a running start, so to speak, for a leap into less known realms.

The primal biologic fact is that all living things are fundamentally alike. While it does indeed seem a far cry from man to such firstlings of life as we see swarming in a drop of water under our microscope, whole fleets of which could sail abreast through the eye of the smallest needle, nevertheless, in composition and fundamental biologic processes they are the same.

Since no one has ever been able to explain just what life is, we resort to describing it in the roundabout manner of picking out various ways in which living differs from non-living matter. In the first place all living matter has a characteristic composition and organization. Of the eighty some chemical elements which make up the substance of nature, only twelve or fourteen enter with constancy into the composition of living things. These, moreover, are present in the form of the same few types of compounds known as proteins, carbohydrates and fats, together with a small number of characteristic inorganic materials such as water and certain salts. These chemical compounds, furthermore, are combined more or less definitely, in a way not understood, into a complex substance termed protoplasm. Protoplasm is the actual living substance of all living things. No matter how complex the plant or the animal, if with scalpel and microscope we strip away the husks of secondary structures which are themselves but products of the living substance, we arrive at this same translucent, semi-liquid material. So

similar is it in all forms, indeed, that there is no known physical or chemical test which will tell us the difference between the protoplasm of man and that of the humblest of the other animal forms.

The similarities of living things, however, do not stop merely in a general sameness of composition and protoplasmic appearance. All living things exhibit similar fundamental processes and their protoplasm is always organized into small, usually microscopic, units termed cells. Each cell consists typically of a central portion known as the nucleus and a surrounding part termed the cytotome composed of what is called cytoplasm. The more complex organisms are made up of millions of such cells, comparable in a rough way to the separate bricks of a brick building, but the simplest living things consist of a single cell each. In the higher plants and animals the cells of the different regions may become greatly modified to perform special functions and so become very unlike in general appearance; furthermore, the cells of some tissues produce additional substances within or without themselves. Thus a muscle cell becomes very different in shape and appearance from a nerve cell or a bone cell; nevertheless when studied carefully each is found to retain the typical cell features. In the higher organisms, as the young individual grows the cells increase in number by division of their own bodies.

Thus the cell, in both the plant and the animal world, is the minute, visible structural unit, relatively complete in itself, to which all vital phenomena may be referred. The characteristic activities of any plant or animal, whether in health or disease, must in last analysis reside in its component cells. Such a brief description of the cell as I have given, however, presents it with illusory simplicity. It is in reality an extremely complicated mechanism, a complete workshop and chemical laboratory in itself, capable of manifesting all the complex phenomena of life.

This discovery that every living thing is a single cell or an aggregation of cooperating cells and cell-products is one of our most important biological generalizations because it has brought such a wide range of phenomena under a common point of view. In the first place, the structure of

*Read before the 79th Annual Meeting, State Medical Society of Wisconsin, Milwaukee, Sept. 16, 1925.

both plants and animals is reducible to a common fundamental unit of organization. Moreover, both physiological and pathological phenomena are more readily understood since we recognize that the functions of the body in health or disease are in large measure the result of the activities of the individual cells of the functioning part. Then again, the problems of embryological development have become much more sharply defined since it could be shown that the egg is a single cell and that it is through a series of divisions of this cell and subsequent changes in the new cells thus formed that the new organism is built up. And lastly, the problem of hereditary transmission has been rendered more definite and approachable by the discovery that the male germ is likewise a single cell, that fertilization of the egg is therefore the union of two cells, and that in consequence the mechanism of inheritance must be stowed away somehow in these two cells.

STATE OF FLUX.

Since all living things are resolvable to this common protoplasmic basis it is not surprising that they have various other features and processes in common which we enumerate among the characteristics of living things. Thus, all living matter is in state of flux. It is continuously breaking down and building itself up again. It may be likened roughly to a water-fall which in a sense is a permanent thing, although its individual particles are always changing. In the living mechanism, however, the conditions are incalculably more complex. The replacing substances, arriving in the form of food, must usually be changed by digestion into smaller units which are then built into the living substance of the organism. Thus it is characteristic of living matter that it can take in the chemical materials it needs in the form of foreign compounds and by rearranging the components of these change them into its own substance. The sum total of the processes involved in this building up and breaking down of protoplasm is termed metabolism.

Growth is generally also enumerated by the biologist in his summarization of the characteristics of living matter. By this he means not merely increase in size as a crystal in a solution or a snowball might grow larger, but increase due to the preponderance of constructive over destructive metabolism. In other words, when living matter changes foodstuffs and builds them up into

its own substance, in excess of the amount needed for repair, growth is taking place. There is usually a characteristic growth period in young organisms until a state of maturity is attained in which waste and repair balance. If waste becomes more active than repair for any considerable period of time, death—permanent cessation of the characteristic protoplasmic activities—must occur.

Still another peculiarity of living matter is its ability to reproduce itself. At some point in their life cycles living things give rise to other living things like themselves or which will become like them through a process of development. In simplest terms reproduction may be regarded merely as overgrowth. Constructive metabolism proceeds to a certain extent and then part of the old organism is detached and continues the life activities as a separate individual. Many of the simpler living things accomplish reproduction by division of their bodies into two equal parts, each of which continues to live and grow. Some organisms fragment themselves into a number of new individuals. In the more complex animals certain cells known as germ-cells are set apart for the function of reproduction, but the principle of overgrowth is not essentially different since all the cells of the organism have been produced through a sequence of cell-divisions from the original germ-cell with which the reproducing individual began its own career.

REPETITION OF ANCESTRAL STAGES.

I should point out also that development does not consist in a mere undirected process of growth but in an orderly series of changes expressing themselves in the form of very definite structural features, each typical of the kind of organism to which it belongs. The whole sequence is in the main a repetition of the earlier successive stages passed through by the parent. Nor is this to be marvelled at since, as just pointed out, it is a detached part of that parent with the same capacities for metabolism and growth.

This tendency to repeat ancestral stages leads to some very interesting conditions in the embryonal structures of present day forms. From the evidence at hand there is every reason to believe that living creatures in the course of the centuries have come to differ from their earlier forbears very greatly. The grip of ancestry is so strong on present day forms, however, that in

embryonic development we find temporary or rudimentary structures appearing which could only have had significance in creatures of very different methods of life, and which are interpretable, therefore, as vestiges of what were once functioning parts. Without going into detail, I want merely to point out that development in living things is intimately bound up with ancestry and can only be understood in terms of it.

In all the higher animals two parents, male and female, are concerned. Each releases a germ-cell; these two cells fuse and produce the fertile ovum which develops into the new being. This participation of two parents in reproduction gives rise to the phenomena of sex and all that is associated with it. It is obvious that such dual parentage complicates the problem greatly since each new individual shares protoplasmic activities from two sources, or in other words, it inherits traits from each parent. The problem of development, in fact, becomes largely one aspect of the great problem of heredity.

RESPONSE TO STIMULI.

Still another property of living matter is that of sensitivity or capacity to respond to stimuli of various kinds. Out of this underlying irritability arise some of the most astonishing attributes of living things, such as the capacity to react to such agents as light, heat, pressure, temperature and the like. The sum total of such responses make up what we call the behavior of the organism. Even the sense-perceptions of man himself are but extensions of these properties as shown in the simpler creatures. All living protoplasm is irritable to some extent, but as we go up in the scale of animal life we find that in addition to this general sensitivity certain cells, in keeping with the general principle of specialization in complex organisms, have been given over mainly to this function in the form of so-called nervous systems. These range all the way from simple isolated nerve-cells or groups of such, to the extremely complex systems of such forms as the higher vertebrates and man. Nevertheless it should be kept in mind that the nervous processes of higher animals are but quickened and intensified reaction of a kind common to all protoplasm, and that no matter how complex the nervous system, it is composed of nerve-cells and their processes, the same fundamental unit from jellyfish to man. Human

behavior is preeminently the expression of the human nervous system.

Finally, the remarkable adjustability of living matter should be pointed out. Every living thing fits its conditions of life, its environment, as a plastic material fits a mold. And since environment is usually not constant for great periods of time, it is plain that if living things are to continue to live they must keep readjusting. In fact, Herbert Spencer has defined life as "the continuous adjustment of internal to external conditions." The close adaptations of animals and plants to their individual stations in life are among the most striking features we find in nature. Not only is there the more or less passively molded type of adaptation to be seen, but many living things, or the various organs of a single living thing, often exhibit a remarkable capacity for individual adjustment to special conditions. The system par excellence which does this in man, of course, is his nervous system, since here centers all his mental and neural reactions and what grows out of them.

THE CELL AS A REAL UNIT.

Returning now to the biologist's conventional structural and functional unit, the cell, let us raise the question of whether the cell is the real unit of organization of the individual, or whether it is only a unit which we find convenient to employ because of its wide existence. In a higher living organism are we dealing merely with a "cell republic" or is there in the individual a definite, characteristic organization handed on from generation to generation, which may or may not be expressed visibly through the cooperation of definite cells?

It is of interest to see what representative biologists have to say about the matter. It is perhaps fitting to turn first to Schleiden and Schwann, founders of the modern cell theory. According to Schleiden, "each cell leads a double life; an independent one, pertaining to its own development alone; and another, incidental in so far as it has become an integral part of a plant." And Schwann says, "each cell is, within certain limits, an individual, an independent whole. The vital phenomena of one are repeated, entirely or in part, in all the rest. These individuals, however, are not ranged side by side as a mere aggregate, but so operate together, in a manner unknown to us, as to produce an harmonious whole.

* * * The whole organism subsists only by means of the reciprocal action of the single elementary parts." In both of these statements considerable stress is laid upon the cell as the determining factor. Huxley voices the opposite extreme as follows: "They (the cells) are no more the producers of the phenomena than shells scattered along the sea-beach are the instruments by which the gravitative force of the moon acts upon the ocean. Like these, the cells mark only where the vital tides have been, and how they have acted." Perhaps no one has better summarized the two points of view than the botanist Sachs, who says: "To many, the cell is always an independent living being, which sometimes exists for itself alone, and sometimes becomes joined with others—millions of its like—in order to form a cell-colony, or, as Haeckel has named it for the plant particularly, a cell-republic. To others again, to whom the author of this book belongs, cell-formation is a phenomenon very general, it is true, in organic life, but still only of secondary significance; at all events, it is merely one of numerous expressions of the formative forces which reside in all matter, in the highest degree, however, in organic substance." Here we see the idea of a fundamental organization of protoplasm which controls all vital phenomena. These are a function of organization, and this organization may or may not express itself in cell units. In any event such units are secondary. The fundamental functions of living things, for example, may be expressed visibly in different animals through the cooperation of a multitude of cells, or through that of a few cells; or as in the protozoa, all the essential life processes—nutrition, respiration, irritability, excretion and the like—can be carried on efficiently in a single cell. There is thus among biologists what may be regarded as an *organism* standpoint in contra distinction to the *cellular partnership* point of view. Each conception is doubtless in a measure true. Unquestionably the cell is a convenient structural and functional unit—a center upon which we can focus our biological problems; however, it is probably not an independent unit determining the individual's organization, but rather something itself determined by the underlying organization of its constituent protoplasm. Perhaps in no field do we find more convincing evidence of the capacity of the "organism-as-a-whole" to override

the independence of individual cells than in that of experimental embryology and morphogenesis. My remaining remarks, therefore, will be confined mainly to the mechanics of development and some of the more evident conclusions to be drawn from this illuminating field.

How much a newly developed creature is the result of specific, preformed substances in the egg and how much it is the outcome of influences imposed from without has been a bone of contention ever since the beginning of embryological study. It is obvious at least that inasmuch as the new being is built up through a series of cell-divisions, its various parts could not have been contained in the egg in miniature in the crude way the early preformationists believed; and it is equally evident that the germ can not be a formless, unorganized mass.

The problem is an extremely complex one. On many points we are yet in the dark. That there are special determining factors present in the germ is certainly evidenced by the fact that we may take two eggs which look alike and put them into an aquarium of seawater so that they will develop under the same conditions yet one will produce a backboneed animal and the other an invertebrate. The egg of a bird can never give rise to a frog no matter what external conditions prevail, because the egg of the bird is not of the same organic constitution as the frog's egg to begin with. That the potentia of the characteristics of the adult are in some way existent in the germ cannot be gainsaid; but in what form? How are they released or expressed?

Normal development implies an appropriate environment, and, as a matter of fact, the natural environment under which the development of any kind of organism comes about is a fairly constant combination of external factors. But what would happen if we radically altered this environment in some one or more particulars? Can we bring about effects not normally occurring in nature? If alterations can be produced, this should give us a means of prying into the mechanism of development and obtaining some sidelights on the methods of hereditary expression. Embryologists have realized these possibilities and in the past few years have done much work to test out various aspects of the problem.

FOUR FACTORS IN DEVELOPMENT.

Broadly speaking four factors of fundamental

importance are involved in development. These are: (1) The nature of the primitive stuffs of which the germ is composed; (2) The influence of the external conditions which we call environment; (3) The chemical, mechanical or other influences exerted by some parts of the developing body on others; and (4) the stage of development at which a stimulus acts.

The third is reducible to special phases of the others, but inasmuch as there are indications that the normal growth of each tissue or organ is probably controlled by one or more specific internal secretions from other tissues or organs producing their effect, in part at least, by inhibiting or accelerating the development of the given part—it is perhaps well for purposes of description to regard such influences as a distinct set of factors.

Slight variations in external conditions are constantly occurring and, since they produce no appreciable effect on the developing form, they are to be regarded as part of the normal environment. It has been found, however, that pronounced alterations of such extrinsic factors as temperature, pressure, gravity, light, moisture or chemical constitution of the surrounding medium may affect development either generally or specifically, not infrequently producing monstrosities. On the other hand, a very slight alteration of the internal conditions will in all probability produce a marked effect.

The results of interference with normal conditions of environment can easily be demonstrated by actual examples. Sea-water lacking one of the three elements, sodium, calcium, or potassium, tends to make the early cleavage cells of the eggs of various marine organisms fall apart; certain acids do the same; and the result may also be accomplished by shaking and by other mechanical means. Such isolated cells or *blastomeres*, if placed in normal sea-water may continue to develop. It has been found that, as extremes, there are two types of behavior. In the one type each blastomere gives rise to a complete new organism, in the other only to a part of an organism. Thus in the first case if the first two blastomeres are separated, each will develop independently and twins will be formed. On the other hand, if the behavior is of the second type each blastomere although continuing to develop will, as the case may be, form approximately only the right or the left half of an individual.

CLEAVAGE.

In the development of *Amphioxus*, a small primitive vertebrate-like form, for example, the blastomeres up to the 8-cell stage, if separated, will each give rise to a normal though proportionately smaller embryo. That is, what is destined normally to produce one individual can be made to give rise to eight. In such cases, at least, the blastomeres are equivalent in their potentialities during early cleavage. On the other hand in such a form as *Dentalium*, a mollusk, the first cleavage plane marks out the developing individual into right and left halves so that when the two blastomeres are separated, each develops into only a half or partial embryo. We speak of the two different conditions as the results of *indeterminate* and *determinate* cleavage respectively. In the indeterminate form all blastomeres up to a certain point of development are of equal value among themselves, and they differ from the original ovum, not as regards specific or related parts, but only in amount of substance; so that any one of them can give rise to a new individual. In the determinate form, on the contrary, specialized egg substances outside the nucleus exist apparently from the first and seem to be so arranged that the first cleavage plane cuts off materials in one blastomere that are not present in the other. As a matter of fact the two types of cleavage are not absolutely distinct from one another because intergrading forms in all degrees are known. The whole question seems to be one of the relative time at which specialized substances are formed in the cytoplasm of the germ-cell or early blastomeres, or at least of the time such substances are segregated in cell-division.

In cases of determinate cleavage, the cleavage planes may follow with surprising accuracy along predetermined paths so that each blastomere has definite characteristics and is destined to produce only certain tissues of the embryo. In some instances, as in the Tunicate, *Styela*, for example as Professor Conklin has shown, if one or more blastomeres of the two or four-cell stage are injured so as to prevent their further development the remaining blastomeres develop as usual, giving rise only to the special group of tissue-cells they would have produced had the destroyed cells remained in place in a normally developing embryo.

In some cases, however, a blastomere that under

certain conditions gives rise to only a half-embryo may under other circumstances produce a complete embryo, thus showing that it still contained all necessary materials. If one of the first two blastomeres of a frog's egg is destroyed with a hot needle, for example, the remaining one, provided it lives and remains undisturbed, develops into a half-embryo. But if the uninjured blastomere is inverted after the operation, or if the injured blastomere is cut completely away instead of being killed and left in place, a rearrangement of the contents of the remaining blastomere occurs and a small normal embryo subsequently develops. This process is sometimes called *post-generation*, but labelling it thus, of course, explains nothing. The significant thing is that even in cells which have undergone a certain degree of particularization toward building a special part of the body there still reside all the potencies required to form the complete organism.

Before leaving the topic of determinate and indeterminate cleavage it should be observed that the determinate type is not, as one might suppose, restricted to the most complex animals, such as the vertebrates. On the contrary these forms are known to exhibit the indeterminate type. Even in the case of man the evidence is that the early cleavage is indeterminate. It is possible that so-called identical twins originate as blastomeres which, having become isolated in the two-celled stage, each develop separately into an individual. How such a separation of blastomeres can be produced in man is not known. Another idea of the origin of identical twins, however, is that although they are derived from the same ovum, the divorcement of the two individuals takes place much later than the two-celled stage, through the suppression of the original axis of development and the establishment of a new one on each side of it.

ORIGINAL ORGANIZATION.

When one reviews the various lines of evidence it is clear that the mere matter of cleavage alone does not seem to be a factor of fundamental importance in development. The outcome is rather the expression of the original organization of the egg. This is well exemplified in an experiment by Professor Lillie on the eggs of a marine worm (*Chaetopterus*). He succeeded in artificially inhibiting cleavage while at the same time securing the formation of a larva. Although there was

absence of cell-divisions the embryo formed external cilia for locomotion and certain other characteristic structures. Various pressure experiments illustrate the same fact. The eggs of some animals when subjected to a deforming pressure between glass plates or in glass tubes may have the direction of the cleavage planes markedly altered. Instead of forming the normal spheroidal group of blastomeres in the eight-cell stage, the cleaving egg of the sea-urchin, for example, may be forced to produce them in the form of a flat plate, yet when the latter is released from pressure it develops into a perfectly normal larva. In such cases, certainly, the cleavage furrows are not of prime importance in marking out germinal areas, and each blastomere must retain samples of all substances necessary to build up a complete individual.

Not only can the experimenter secure in some cases several individuals from one egg which was originally destined to produce a single individual, but he can also accomplish just the reverse. The coalescence of parts of two eggs or even of two complete eggs has been brought to pass in such forms as the sea-urchin, with the result that a normal larva was formed—of giant size when the fusion was between two whole eggs. Likewise two blastulas, even of different species, can be made to fuse to form a single larva although there is frequently a tendency for some parts to be double.

Professor Child has shown in numerous studies extending over a period of twenty years or more, on a wide range of animals, that the developing individual, in bilaterally symmetrical forms, has a marked polarity, with different rates of metabolism at different points along the longitudinal axis of the body. In the early embryo the developing head-end always shows the highest rate of activity, this activity gradually diminishing toward the posterior end. Child has also shown that the more active a region is, the more susceptible it is to adverse chemical or physical influences. He found that by applying any one of various depressing agents at the appropriate stage of development characteristic defects can be produced at will. The differing susceptibility of various regions at different stages of development is responsible for differences in the nature and magnitude of the result.

Many interesting experiments might be cited showing the production of particular or restricted

effects due to alterations in external conditions of development but one or two further illustrations must suffice. Professor Stockard has found that when, at a certain critical period, the developing eggs of *Fundulus*, a common sea minnow, are subjected to the action of various magnesium salts dissolved in sea water, a large percentage of them—as many as sixty in one hundred individuals—develop a single median eye instead of the ordinary pair. He and others have also secured cyclopean monsters through the use of alcohol, ether, and certain other reagents. Thus Bellamy obtained such cyclopia in frogs by applying a solution of lithium chloride during very early development. Different degrees and kinds of cyclopic defect—complete, partial, “hour-glass,” and the like—are obtainable, depending apparently upon arrests at particular stages of development. Entirely different eye-anomalies and other abnormalities may be secured if the same means used in producing cyclopia are applied at a different stage of development. Inasmuch as the same type of defect may be produced by any one of a number of different chemical or physical means, it is clear that the response is not specific with respect to a given agent.

Incomplete separation of blastomeres usually results in the formation of double monsters, that is, Siamese twin-like forms. By keeping the two-celled stage of the frog upside down such monstrosities of varying degrees of duality may be obtained. The same effect has been produced in the case of certain salamanders by tying a hair around the developing mass.

EFFECTS OF OXYGEN SUPPLY.

In a recent experimental study on twins, double monsters and other deformities, and on interactions among embryonic organs, Stockard, like Child, attributes much importance to reduction of oxygen supply at critical stages of embryonal or organal development in causing arrests which result in the production of abnormalities. He shows that by temporarily lowering the temperature and thereby reducing the rate of oxidation, or by directly cutting off the supply of oxygen, the normal, continuous course of development of the embryo or of some embryonic part may be interrupted with the result that characteristic suppressions or distortions may occur. Interruption of development during late cleavage, for example, results in

the production of a considerable number of twins and double individuals.

Likening the developing animal body to the growing plant shoot Stockard has given a very clear interpretation of many of the structural reactions, normal and abnormal, which may be observed. In a shoot of the ordinary garden privet, for instance, under certain conditions one finds a rapidly growing end-bud and, in the axis of each leaf, a resting axillary bud. As long as the apical bud is growing vigorously the axillary buds remain dormant, but let the terminal bud become inactive, or be injured or removed, and the axillary buds begin to grow. If the terminal bud is injured so as to grow more slowly, as long as it keeps growing the activity of the axillary buds will be correspondingly held in check. In other words, a certain competitive pressure exists among the buds on the stems, and extension of the axillary buds is ordinarily inhibited because of the very fact that the apical bud is growing vigorously.

In the early embryo of ordinary animals there is similarly a linear axis of growth which leads off in development. But if, as various embryologists, notably Child and Stockard have demonstrated, the original growth axis is caused to slow down or become inactive by any of several well known physical or chemical means, then one or more new axes arise. Thus apparently competitive processes similar to those in the plant stem are at work in the developing animal. As long as the original axis maintains vigorous activity it holds in check the initial growth tendencies of other regions, but once it is inhibited or is prevented from coming into active expression then one or several new growth points may manifest themselves and establish new axes. In this way Stockard explains the origin of the twins, double embryos, and other multiple conditions he has so successfully produced in his various experiments. In fish he finds that the degree of separation of the two components of double monsters depends upon how far apart the two new growth points arise in the ring-like region (*germ-ring*) of greatest formative activity. He has secured graded series of fish ranging from individuals with slightly separated heads on single bodies through specimens with two bodies and common tail to completely separated twins.

When one of the originating buds chances to be more favorably located than the other, however,

it grows at normal rate and develops normally while the less favored one grows more slowly and always develops abnormally. And the latter shows deformities in direct proportion to its degree of suppression. Stockard believes that such structural reactions are universal among developing vertebrates. Since in man there are many cases on record of dual monsters of different degrees of completeness from two-headed forms to two almost complete individuals, as well as individuals joined to one another in various positions, it is reasonable to suppose that factors similar to some of the foregoing have contributed to their productions. Such double forms are always of the same sex.

DEFORMITIES IN SINGLE EMBRYOS.

Not only is retardation of the rate of development the dominant factor in the production of twin-monstrosities but, it is responsible as well for innumerable deformities which may arise in single embryos. In the words of Stockard, "all unfavorable treatment whether chemical or physical tends primarily to slow the rate of development, and the developmental stage at which the slowing occurs determines the type of deformity." Applied at a very early period of embryogeny the adverse influence may cause the formation of twins and double individuals; applied slightly later, double individuals are never produced but various abnormalities of the eyes are the prevailing defects; still later, gross deformities of the eye do not result, but some other actively developing organ is the part affected. Thus he has succeeded in locating the respective developmental periods during which such organs as the eye, the heart and blood vessels, the mouth, the gills and the liver may be greatly modified or suppressed. He believes that his results warrant the conclusion, "that there are in the development of all or many organs certain periods at which those organs are peculiarly sensitive to any unfavorable condition which may act upon the embryo. Further it may be emphasized that the peculiarly sensitive period is very close to the actual moment of origin of the organ in question. After an organ has arisen and passed through the earlier stages of its development it becomes less inclined to suffer radical modification in its manner of development as a result of unfavorable conditions. After it is completely formed it is quite resistant."

In embryological development one part may

very materially condition the development of others which are wholly unrelated to it in origin. Thus the sensory parts of the eyes originate as a pair of bulb-like outgrowths from the sides of the forebrain, known as the optic vesicles. As the bulb develops it becomes marked off from the brain by means of a definite stalk, and through elongation of this stalk the vesicle soon comes into contact with the external ectoderm of the embryo. At the point of contact of the edges of the vesicle and ectoderm the latter thickens up to form the crystalline lens of the eye. Although a lens may sometimes form, if by any means the optic vesicle is prevented from touching the ectoderm, it frequently will not. Experiments in certain amphibians show that if the optic vesicle is transplanted beneath the ectoderm at another place in the embryo, notably in the head region, so specific is this lens forming stimulus that any ectoderm which comes into contact with it forms a definite lens. In other words, epidermis that does not normally give rise to lens will do so if brought into contact with the optic vesicle. Such an experiment raises anew the question of how much an organ which develops in a given region of an animal is a self-differentiating structure, how much it owes its occurrence to contact and other stimuli.

REGENERATION.

The regeneration of lost parts by animals and plants is a phenomenon that must also be reckoned with in a discussion of the relative roles of heredity or environment in development. That many plants have a practically unlimited capacity for repairing mutilations is a fact familiar to every one. A slip cut from a geranium readily regenerates the missing parts and becomes in a short time a complete plant. Likewise, the cut end of a limb of a tree heals, and sends forth new branches or leaves. This capacity of pieces of plants to give rise to new plants has long been known. It was supposed by older investigators to be confined to the plant kingdom and was in consequence used as a test to determine whether an organism was a plant or an animal. Thus in 1750 Trembley experimented on *Hydra* to determine whether the new creature which he had found was a plant or an animal. *Hydra*, as we know now, is a simple multicellular animal which has remarkable power of regenerating a complete individual from fragments cut from its body. It, like various other

simple animals, also reproduces at times by budding off young individuals from its own body.

Following Trembly other investigators experimented further and discovered that the same power of regeneration existed in other forms, such as earthworms, fresh water worms, the heads of snails and the limbs of newts. In the starfish the body may be torn completely in two and each half will regenerate the missing portion. Again, the whole viscera of some animals will regenerate if removed and the amputated leg, or eye or antenna of the crab or the crayfish will be restored. A salamander has had its tail cut off eight times in succession, and the eyebearing tentacle of a snail has been removed twenty times, yet after each mutilation the missing organ has been produced anew. In man and the higher vertebrates regeneration is much more limited in extent, being confined for the most part to the healing of wounds.

REGENERATION EXPERIMENTS.

In regeneration experiments, because of its wide distribution and the ease with which it may be obtained and kept under laboratory conditions, as well as on account of its remarkable regenerative capacity, *Planaria*, a small flatworm of which there are many species, has been widely used. If an ordinary planarian is split at the front end without entirely dividing the body, the two lobes thus produced will each become a perfect head. It may be cut into almost any direction or cut into several pieces and each will develop into a complete though smaller individual. The restoration is accomplished partly through a process known as *regulation* in which the old tissues are remoulded into new structures, and partly through a real regeneration or growth of new parts. If, however, the head is cut off too far forward, instead of a new body, a new head may grow out in the opposite direction and thus give rise to an individual with two heads and no body. Similar results have been obtained with other forms. The earthworm, for example, if cut too near the tail end may regenerate a new tail toward the front end instead of the head necessary to a complete animal. As to the exact meaning of this there is much debate among experimentalists themselves and we need not go into it beyond noting the fact.

Some remarkable examples of restitution of body form and function have been found by Professor H. V. Wilson among sponges and hydroids, both groups of which are simple aquatic animals.

These organisms were cut into small fragments and then pressed through the meshes of fine silk bolting cloth. In this way the flesh was broken up into individual cells or very small cell aggregates. Shortly after the operation these isolated elements were observed to have fused together into lumps or sheets of tissue. Although originally there were several kinds of cells in the tissues used in the experiment, in the new mass all the cells seemed to have lost their specialized character and to have blended into an indifferent cellular embryonic mass. Soon, however, specialization set in anew; ectoderm and entoderm together with a central yolk mass differentiated out of the fused homogeneous clumps and larval stages arose very similar to the typical normal larva. Ultimately new complete adults developed.

In such experiments the evidence all indicates that the individual cells of the new organism may form part of an entirely different organ or tissue from what they did in the original animal. In other words it is clear that although a given cell occupies a certain place in an organism it is not always irrevocably committed to the duties of that place alone, but may assume other forms and function if placed in a different part or if subjected to very different conditions.

Further significant facts are brought to light when the normal conditions which surround a regenerating form are altered. If *Tubularia*, a simple marine animal, be decapitated it will regenerate its "head," that is, the portion bearing mouth and tentacles. If, however, the animal be cut off at both ends and that which bore the head is buried in the sand a new head is regenerated at the free or foot-end and a foot at which was originally the head-end. If both ends are buried in the sand neither regenerates a head, and if the body is suspended free in the water both ends develop heads. The whole phenomenon here seems to depend upon contact with a solid substance. Such contact, or lack of contact, determines which end shall be foot, which head. Such a transformation or substitution of one organ or part for a different one is known as *heteromorphosis*.

Certain experiments which have been performed on the sea-anemone, *Cerianthus*, are instructive in this connection. Although having somewhat the appearance of a plant *Cerianthus* is really a simple animal. The body is essentially a double-walled sac with a tentacle-crowned "head"-region at one

end and a so-called foot at the other. In the center of the circlets of tentacles is the mouth. If an incision is made in the side of the animal new tentacles may spring up around it as if surrounding a mouth and such new tentacles behave toward food exactly like the tentacles surrounding the old mouth. If the tentacles of the two different systems are stimulated simultaneously with the same piece of meat a struggle follows, each attempting to draw the meat toward its own mouth region.

An interesting example of regeneration which seems to be conditioned by the presence or absence of certain internal parts correlated with the structure removed has been seen in various crustacea, among them the prawn (*Palaemon*). When the eye is removed a new eye regenerates but if the eye stalk is divided very close to the head so that not only the eye itself but the optic ganglion at its base is also removed, then not an eye but an antenna grows out from the wound.

GRAFTING.

Closely allied to the subject of regeneration among animals is that of grafting. It is not an uncommon experiment in laboratories to take two different animals, indeed perhaps different though allied species of animals, and graft them together to form a composite. The grafting of lower forms like hydra or like the earthworm is comparatively easy. The front half of one earthworm readily grows fast to the tail half of another if they are fixed firmly together for a short time.

Among the lower vertebrates experimental transference of parts of the body such as the grafting of the front end of one tadpole onto the tail of another is not of particular difficulty. Professor Harrison, one of the pioneers in this interesting field of experimentation, succeeded in securing a composite frog of two entirely different species by grafting their tadpoles together in this way. The fact that the two species differed materially in color markings added to the visible clearness of the experiment. The resulting frog seemed to have perfectly normal instincts and powers of coordination. Just as striking results have been obtained through grafting together the pupae of different species of the larger moths.

Through experiments in transplantation, Harrison has been able to clear up, among other things, several disputed points regarding the relation between nerve-centers and organs. In his own words: "Limbbuds of tadpoles, when transplanted

to various parts of the body of normal individuals, develop normally and acquire usually a complete or partially complete system of peripheral nerves, which have normal arrangement and are connected with the nerves of the host supplying the region in which the limb is implanted. * * * The nerves are not formed *in situ* in the transplanted limbs but grow into them from the nerves of the host." Others of his experiments show also that functional activity of the part a nerve fiber is to supply or of the fiber itself is not necessary for the development of the fiber, but that peripheral fibers originate wholly from extensions of the ganglion cells.

In the field of pathology much valuable information is being gained at present about the cancer problem by transplanting tumor-cells from individual to individual, and generation to generation of experimental animals.

The capacity for grafting in higher vertebrates like man, for example, are much more restricted, yet here we are familiar with such operations as skin grafting and the transfusion of blood. However, even in mammals, in attempting to extend the bounds of modern surgery some remarkable cases of transplantation of organs from one animal to another of the same species have recently been accomplished. Various internal organs, such as pieces of blood vessels, kidneys and other structures have been replaced in one animal by corresponding organs removed from another animal of the same kind. Much silly nonsense, however, has of late been going the rounds of the popular press about the transplantation of non-human tissues such as "monkey-glands" into man. While bits of tissue transplanted from one species of mammal to another may occasionally become attached and temporarily re-establish their circulation, they soon undergo destruction by a process apparently akin to digestion and are replaced by scar tissue. Even for successful blood transfusions from one human being to another, since there are four distinct types of human blood, the blood of the donor must be of the same type as that of the patient.

PERSISTENCE OF SPECIALIZATION

In spite of the wonderful regulative and regenerative capacity manifested by some animals or some parts, on the other hand, some remarkable cases of persistence of specialization or differentiation once established are known. In recent

times much attention has been given to the culture of tissues removed from the body. It has been found that if such tissues are carefully removed so as to avoid infection, kept at suitable temperature in lymph or appropriate nutritive fluids, and transplanted from time to time into suitable new media, they may be kept alive and growing, not only for several days or weeks, but even for years. While adult tissues may be so manipulated the most instructive results have been derived perhaps from bits of tissue isolated from young embryos. In this way tissues which normally develop in internal positions that cannot be inspected may be exposed and observed to undergo more or less of their characteristic differentiation under the microscope. Thus, for instance, pieces of embryonic tissue about to give rise to nerve fibers may be isolated and studied in the actual process of forming such fibers by the outflowing of protoplasm from the central cells. Likewise masses of cells clipped from regions which would give rise to muscle in the normal embryo, still retain their impulse toward muscle formation, and although placed under totally different conditions nevertheless differentiate into muscle fibers showing typical striations. In favorable preparations they have been seen, after two or three days of development, to undergo contractions.

At the Rockefeller Institute in New York City tissue removed from the heart of a chick-embryo has been thus cultivated apart from the body for over fourteen years and is still true to type and growing as actively as ever. Speaking of this material at the end of ten years of its growth Professor Wilson in his book on *The Cell* says: "More than 30,000 cultures have thus been obtained from an original small fragment, the cells having passed through about 1900 generations; and had it been possible to preserve all the cells thus produced their combined volume today would be far larger than the sun." Had the original chick from which this tissue was taken lived and grown to maturity it would probably have been dead long ago since the natural length of life in the fowl is ordinarily only some six or seven years.

OLD AGE AND DEATH.

Such facts as these together with the observation upon the almost limitless powers of continuous growth of tumors transplanted from generation to generation and the apparent deathlessness of

various protozoa, to say nothing of the cultivation of plants by cuttings through innumerable generations without impairment of vigor, open up the whole great question of old age and death. They raise a doubt that senescence and death are inherent in all living matter. These twin abhorrences of man seem rather to be due to secondary conditions. Needless to say such matters have long been subjects of inquiry by biologists. Opinions regarding the causes of senescence are varied. We cannot review them here. The outstanding fact is that in tissue-cultures even highly specialized cells can live on apparently indefinitely, at least far beyond their normal span of life.

Professor Child's contention that senescence is due to decrease in the rate of metabolism and that if in one way or another we can remove "the structural obstacles to metabolism"—the inactive constituents the accumulation of which is incidental to the vital processes in complex organisms—a rejuvenescence results, is perhaps as near the truth as any of the hypotheses in this field. At any rate, he has given us the best experimental evidence of keeping certain simple animals perpetually young or of making them grow "young" again once they have aged. For example *Planaria velata*, a simple flatworm, passes through its entire life cycle in from three to four weeks. The young animals at first grow rapidly but the rate of growth gradually decreases until when they have attained a length of about fifteen millimeters, they cease to feed and gradually become inactive. Disintegrative processes set in and finally the body automatically breaks up into small bits. Each fragment eventually reconstitutes itself into a new, physiologically young animal which repeats the life history. This is the only kind of reproduction Professor Child observed in this form during over thirteen years of study. In experiments with a stock of these animals lasting over three years, he found that by controlling nutrition he could seemingly control the aging of the animals. By keeping them without food for a time he could make them diminish in size and become in appearance and in physiological reactions like young individuals. He could even reduce them in this way to less than one-fourth their original size and by proper nutritive control he could maintain them at any age-level he desired. Thus he apparently effected an actual rejuvenescence. While a portion of his laboratory stock kept under con-

ditions of full nutrition passed through thirteen generations he was able to maintain his experimental animals taken from the same stock in a condition of physiological youth all this time, exhibiting all normal activities except reproduction. In other words, in a form which runs its natural course in some four weeks he was not only able to retard or inhibit senescence for over three years but could even at will make the organism become more juvenile.

Speaking of man Child says: "For his high degree of individuation man pays the penalty of individual death, and the conditions and processes in the human organism which lead to death in the end are the conditions and processes which make man what he is." Professor Pearl's view of senescence as the loss of the normal interbalance of cells is also interesting and suggestive. He points to the fact that a higher organism is built up of mutually dependent cells held in very complex equilibrium. Pathological changes in any part ultimately upset this balance beyond the point of repair.

CONCLUSION.

As to what we are to conclude about the mechanics of development from such facts as have been reviewed, the complete answer is by no means evident. It seems probable that in most eggs, under normal conditions of development, a given part does have a prospective relation to specific parts of the developed organism, but in many cases this prospective outcome is not unalterable. It is prospective only in the sense that in the original normal egg it constitutes part of a particular internal organization which, subject to the operation of certain external factors termed the normal environment, will give rise to a developed individual.

In regeneration or regulation, whether it be merely restoration of a lost appendage, or the development of a complete body from a fragment of an old one, the phenomenon is obviously of one piece with the more ordinary phenomenon of development. For whether the case be one of development from the egg, of budding or fusion, or of restitution, the problem is that of explaining the genesis of distinctive organs and attributes from a fundamental protoplasmic mass of definite and specific constitution and ancestry. The fact must not be lost sight of that when, for instance, a new head with tentacles is caused to develop on the side of *Cerianthus*, it is a *Cerianthus* head,

not that of some other form. Likewise, although the prawn may develop an antenna in place of a removed eye, nevertheless it is an antenna still characteristic of the crustacean organism which bears it. And so for the other examples reviewed. No matter how marked an effect may result from the modifications of external conditions the quality of the reaction is in the main always determined by the nature of the organism. While external agents may be of great importance as stimulus and while unquestionably environment restricts or conditions and sometimes markedly modifies the outcome, the nature of the response is determined by the inherited organization of the developing form. Specific forms, then, though they may be greatly modified by external conditions, are not *caused* by them. Within the organism itself, however, we have seen that the same initial materials may yield very different end-products under different conditions. Blastomeres originally directed toward becoming one part of an individual may be switched about to become another part; tissues originally subserving one function may be turned to other uses; fragments of the simpler animals may remodel themselves into complete individuals of smaller size. The production of double monsters of identical twins or of several individuals from one original oöperm, as in the armadillo, indeed, all point to the same conclusion. The inescapable inference is, in brief, that a particular cell takes on the characteristics of a special tissue, not because it differs constitutionally from other cells, but because of the differential nature of the stimuli to which earlier it has been exposed or to which it is subjected as a result of its special location in the developing organism: that all the descendants of the fertilized ovum, germinal and somatic cells alike, retain the hereditary potencies of the original zygote. Because of limitations due to its particular location in the organism, however, a given cell realizes only a small proportion of its inherent possibilities.

Since, then, the distinctive structural effects and functions which characterize the respective tissues are probably the outcome of unequal activities among the same kinds of fundamental protoplasmic constituents in differing local environments, the "germplasm," recognized so universally by biologists as the actual substance of inheritance, must be something that is present in

every cell. While, obviously, all cells have it, ordinarily only the cells specialized as reproductive cells pass it on in the form of a new generation. This "something," is in all probability the chromosomes of the cell-nucleus.

Were there time, the part played by the internal secretions in development during the post-embryonic period should be reviewed. I shall have to content myself with the bare reminder to you of their great importance. This is done with gain rather than loss on the part of my audience, however, since we are shortly to hear directly from one of the great masters in this field. Nor can I pause for certain farther considerations of the limits of adaptability of living organisms which I had

hoped to discuss from the standpoint of the natural defenses of the body. As a final plea, however, I should like to insist a bit on the importance of the point of view which regards the organism as a whole. Biologically there can be no question of its significance, and I wonder if it may not carry a note of wisdom for the medical specialist; namely, that of not overlooking the individual himself in too narrow a concentration on some part of him. Compensation, balance, the maintenance of the entire individual, the subordination of the parts to the whole even sometimes to the point of functional substitution of one part for another, is certainly the key-note of the living world.

Biologic Basis of Immunity*

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I appreciate the invitation to discuss the basic medical problem of immunity before this assembly. It is difficult to cover in a short time the entire question from the theoretical viewpoint of modern biology, with regard also to its practical application. But I hope you will be able to gather from my deductions that biologic immunology has more to offer to the daily practice of medicine than the occasional use of diphtheria or tetanus antitoxin.

The great importance of the problem of immunity lies as much in its reference to preventive medicine as in its curative possibilities. For we know that quite a number of contagious diseases cannot be assailed successfully by direct means such as disinfection or avoidance of contamination, but can be counteracted by strengthening the resistance of the host organism.

This aim of maximal resistance to all aggression of foreign organisms is by no means a pacifistic ideal. Pacifism in social hygiene, the principle of security without fighting ability, did not accomplish all that the pioneer age of bacteriology had promised. The avoidance of contamination by quarantine procedures, segregation of bacteria carriers, isolation and disinfection while working out satisfactorily against a certain number of epidemic diseases, proved not to be very efficient in other large groups and were more or less a

failure in the third group represented by most of the coccic and grippal infections.

One of the great dangers of overcivilization is the substitution of a hygienic police mechanism for a biologic self-protection with the consecutive stunting of the natural defense mechanism and thereby stunting of the entire race. Experiences in preventive medicine and the statistics of immunity have proved in certain diseases, especially diphtheria, the inferiority of the upper classes with better hygienic protection compared to that part of the population subjected to repeated infections which necessitate better development of self-defense.

Immunity need not always result from active self-defense. The primary or congenital immunity of a species or a race to the aggression of certain microbes is due to inaccessibility, not to active defense. This inaccessibility may be a surface immunity, the ectodermal structures forming a natural stronghold which is not penetrated. Or the invaders although succeeding in entering the tissues fail to hold their ground on account of unfavorable living conditions in the enemy's territory with regard to temperature, P^b-concentration and the chemical composition of the medium. This is safety, not by merit, but by inheritance. Or the merit may not be ontogenetic but a phylogenetic one, the species having gradually developed this inheritance of passive safety by the survival of the fittest.

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FACTOR OF HEREDITY.

The factor of heredity is one of the most decisive in the entire question of immunity. There are families whose members are not only lacking inherited protection against certain infections, but they are also unable to develop the usual mechanism of biologic defense after the proper period of incubation. This organic inferiority if increased, for instance by intermarriage, leads inevitably to unviability and final extinction of the family. Moreover entire races would suffer a similar extinction did not natural and eugenic processes foster selection of the fittest and thus develop the power of biologic self-defense. The development of racial immunity is achieved by the gradual elimination of the most susceptible. Although it is our duty to interfere by all means of the medical art with the elimination of the individual patient, we should realize the ultimate needs of the race and strive to improve the biologic fighting mechanism with reference to heredity.

TYPES OF NATURAL DEFENSE.

I desire to give a short outline of different kinds of natural defense against microbial invasion without describing in detail variations which do not clarify the broad principles of immunity. Introduction of any foreign protein, organized or amorphous, causes irritation. The ability to disintegrate and to eliminate the protein varies greatly with inherited and acquired constitutional powers. The process of disintegration of an alien protein within the body includes certain physiologic reactions. The local reactions are called inflammation and the systemic reactions are the disease. The biologic weapons, proteolytic or bacteriolytic enzymes, are chiefly contributed by the tissues at the portal of entry and by some organs of specific affinity for the foreign protein, above all by the lymphoid and hematopoietic structures. The destruction of the invader is followed by sundry symptoms of intoxication the grade of which varies according to the amount and nature of protein. Should the splitting up of the protein be too rapid or too thorough death may result not from the infection, but from intoxication caused by products liberated from disintegrated bacteria. An example of death in victory.

Recovery from infection is due not so much to complete destruction of the invading microbes, as to the acquired resistance of the body towards their toxic split end by-products. An unlimited

growth of germs at the expense of the host organism would result in the final substitution of the native by the foreign protein (Vaughan), a minor grade of which is happening in bacteremia. Frequently during convalescence and even after complete recovery from many of the infectious diseases the pathogenic organisms persist in the tissues or within the circulation without any pathogenic action.

Therefore we have to consider a double function of the protective mechanism against bacterial infection, the checking of unlimited growth of bacteria by way of total or partial destruction and the development in due time of biologic indifference to the toxic by-products of bacterial metabolism and destruction. This latter part of the defense mechanism means immunity, strictly speaking, or we may use the special term "anergy" (Von Pirquet).

ANERGY AND PROTEIN-IMMUNITY

Anergy means the change of the body cells from hypersensibility or allergy to temporary indifference. Recovery from infection depends to a large extent on an equilibrium between bactericidal function and anergy. There is a mutual relation between antigen-antibody reaction and bacterial destruction. While the allergic phenomena depend on the forthcoming of protein cleaving antibodies, we know that the further development of bacteriolysis, bacteriophagy and the whole leucocytic reaction is largely favored by the condition of hypersensitiveness.

A premature onset of indifference or anergy would deprive the organism of the necessary stimulus to check the expansion of the infection. Some striking examples of an unfavorable lack of normal hypersensitiveness are miliary tuberculosis with an absence of tuberculin reactivity, a severe type of measles with a scanty and sluggish rash or pneumonia with only subfebrile or even subnormal temperature. In all of these an insufficient reactivity of the body cells is outweighed by bacterial expansion. It might be well to adopt the term "negative anergy" (Von Hajek) for the condition of unfavorable and untimely insensibility. According to this classification we call the cellular indifference during incubation prior to the forthcoming of proteolytic and bacteriolytic anti-bodies, "neutral anergy," and the final immunity to the bacterial endo-toxins after recovery "positive anergy."

It already has been indicated that failure to develop proper insusceptibility may lead to a precocious exhaustion of the general resistance although there may be extensive bacterial destruction. Early death from lobar pneumonia, uncomplicated typhoid fever, virulent erysipelas or smallpox belong in this group of endotoxic or proteotoxic phenomena.

ANTITOXIC IMMUNITY

A somewhat different mechanism of immunity occurs in diphtheria and tetanus. Here the lesions are due less to excessive bacterial expansion than to poisoning by a specifically toxic by-product of bacterial metabolism. The action of such a true toxin or exotoxin is entirely different from an endotoxic bacterial split product. The diphtheria poison has a primary toxicity irrespective of incubation. As soon as introduced in the tissues it exerts its specific inflammatory, necrotizing and neurotoxic action until neutralized by another specific product of the body cells, the antitoxin. The pre-existence of antitoxin or the ability or inability to produce it without delay determines the degree of constitutional safety and potential protection.

One of the great aims of medicine is to protect man against inevitable epidemics by application of the principle of artificial stimulation of antibody production. The means are suitable methods of vaccination to develop positive energy. Preventive active immunization should not be considered as a mere substitute for natural self-defense. Youth in modern industrial society will always be benefited by physical training, outdoor sports and military training. Immunologic protection should likewise be provided to the coming generations as preparation against inevitable struggles between macroorganism and microorganism.

PASSIVE IMMUNIZATION.

Passive immunization which supplies antibodies of foreign origin, although a therapeutic procedure of an immense value, is not to be considered an ideal preventive measure, but only as a serological stilt of transient value. I showed that blood-free extracts of mucous and lymphoid tissues lost their antitoxin within the second week after serum injection, while it was still present for more than a week longer in the circulation. The tissues eliminate the foreign antibody sooner than it disappears from the blood, they are therefore liable

to infection at an early date. As a control to these findings I demonstrated that the tonsils removed from patients having developed active immunity contained antitoxin, commensurate with the circulating antibodies. Active immunization produces a stable cellular and humoral protection. Passive immunization confers only an evanescent immunity.

In the new method of passive immunization for measles obtained by administration of convalescent or normal human serum (Degkwitz) it is possible to provide a durable immunity by a special trick. The serum dose should not be quite sufficient to suppress the disease. There results an attenuated form of measles, analogous to that produced by smallpox vaccine, resulting in a lasting active immunity.

By carefully preparing and selecting the material for active immunization, by adapting the method of application to special circumstances we are able to obtain better and better results in safeguarding the population from the full vigor of epidemics.

CONSTITUTION AND IMMUNITY

In dealing with the specific factors of infection and immunity we must realize that the microorganisms are not the only cause of disease but merely the initiating factor. The attitude of the body toward infection, its general predisposition and resistance decide the outcome of a bacterial attack quite as much as the aggressors themselves. We know that a high grade of immunity is always an attribute to full physical and psychical health and is a good index of the general physiologic activities of the body. The basic requirements for normal biologic immunity are provisions of suitable nourishment, to meet the demands for growth and the production of energies, abundance of sunlight and fresh air and appropriate amounts of exercise. Opposed to these are exhaustion, exposure to cold, intoxication by alcohol and other narcotics, mechanical injuries and worry. Most of these points do not need any special explanation. There can be no doubt that whenever a resistance of one hundred per cent is required, a trifle of adversity might influence the balance of forces in an unfavorable way.

The action of two of these factors has just been subject to thorough analysis within the last years. It is impossible to consider the whole question of deficient nutrition and of light with regard to im-

munity. The influence of the three known vitamins on immunity to infections has been established both clinically and experimentally. The favorable action of fat and the less favorable of carbohydrates in nutrition of tuberculous individuals was proved long before the discovery of the vitamins. However the main value of fat consists in its function as a vehicle for the A-vitamine. I need only to touch upon its preventive action regarding rickets and keratomalacia. Of the C-vitamine we know that a slight but constant reduction of it in nutrition does not cause the typical symptoms of scurvy, but produces a distinct reduction in the resistance to infections of any kind. The preventive and therapeutic value of orange and lemon juice are well understood. The antineuritic substance, contained for instance in yeast, has been found lately to have a considerable effect in increasing body resistance.

The action of sunlight, especially the ultraviolet rays, in promoting the immunologic cell activities is generally known. The technique of determining the proper administration and the optimal dose makes heliotherapy almost a medical specialty. Actinotherapy including X-ray treatment is on the threshold of a most promising development. The value of sun, open air, clean living and wholesome exercise in developing the fighting strength of our boys and girls against enemies, microorganisms and macroorganisms likewise, are obvious.

I hope you will agree with my premises that life never will become peaceful between men and microorganisms, that there cannot be any artificial fence between the enemies. Preparedness, battles and evolution will lead to a sure predominance of civilized man.

The Influence of Ductless Glands on Biologic Reaction*

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Many different functions have been attributed to the various glands of internal secretion, but up to the present no one has been able to prove what chemical reactions are directly influenced by any one of these glands. During the early years of investigation, the surgeon, clinician and pathologist contributed all the advances made, but for the future little further progress can be hoped for from them. The problem has been carried on to the point where the physicist and chemist must supply the means of solving it.

Each of the ductless glands elaborates one or more of the substances that are vital to normal activity and health. These compounds are important because they influence certain chemical reactions which are being carried out constantly in the animal organism. After the chemist has determined what these reactions are, the problem is not finished but rather has just begun. With the information which the chemist will eventually secure, there will come a generalization concerning physiologic processes and internal medicine. New tools will be furnished with which the clinician can study, prevent and cure metabolic disorders.

The chemical investigation of the ductless

glands has already produced results which can be used to point the direction for further work. I shall describe somewhat in detail three of the glands of internal secretion whose chemical nature is now somewhat understood. Epinephrin was separated from the suprarenal gland in 1902.² A few years later it was made synthetically. Because of the striking effect this substance produces on blood pressure, physiologists have attempted to explain its physiologic importance by means of changes in blood pressure. More recently Boothby has shown that epinephrin has a profound influence on the rate at which energy is produced, and the amount of substance necessary to change the basal metabolic rate is surprisingly small.

Thyroxin was isolated in 1914.⁵ With the completion of its isolation and identification, an opportunity was presented to study the influence of the thyroid gland in more detail than had been possible up to that time. It was soon shown that thyroxin also has a profound effect on the rate of production of energy in the body and that the administration of 1 mg. to a myxedematous patient will raise the basal metabolic rate 3 per cent. It was also shown that the basal metabolic rate of a patient with high-grade myxedema is approximately 40 per cent below normal. This would indicate that the maximal amount of thyroxin

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functioning in the adult human being is about 13 to 15 mg. An interesting fact which was established is that the administration of 1 mg. of thyroxin will cause the combustion of between 400,000 and 500,000 mg. of sugar in the myxedematous patient. Another problem which could be answered by means of thyroxin is how long the substance functions. It was found that the maximal response to a single injection occurs on the tenth day after administration and that the effect lasts as long as five or six weeks.³

The isolation of insulin is still fresh in our minds. Recently Abel, Geiling, Alles and Raymond, have shown that it can be purified to such a degree that 1 mg. contains 40 rabbit units. Here again it is evident that the amount of insulin functioning in the body is exceedingly small.

These investigations have broadened our viewpoint concerning the activity of these three glands, and at the same time they have narrowed the limits within which the chemist must search for an answer to explain their activity. In 1900 the word "hormone" was introduced into physiology to explain the action of secretin. The original meaning of the word is to arouse or stimulate to activity a certain gland or tissue by the introduction of a specific agent. With thyroxin and epinephrin there is striking evidence of stimulation of metabolism, but the word "hormone" in its original meaning is not broad enough to interpret known chemical reactions which are effected by these substances. It now appears certain that thyroxin and epinephrin do more than merely arouse a cell to activity. They furnish the means by which the cell can function and they must be looked on as true catalytic agents. They produce their effect by virtue of the configuration of the molecule which permits them to stimulate cellular activity.

During the last six years at the Mayo Clinic, we have been engaged in preparing a large series of compounds closely related to thyroxin in order, first to synthesize thyroxin, and second, to study the mechanism by which it functions. I shall not describe the details of this investigation, but it has been shown that these synthetic substances and thyroxin possess physiologic activity because of their ability to interact with hydrogen.

There is a time-honored belief that the thyroid gland controls protein metabolism, but recently Deuel, Sandiford, Sandiford, and Boothby have

shown that the basal metabolic rate can be elevated by thyroxin without a corresponding sustained breaking down of protein. The correct interpretation appears to be that the thyroid gland regulates the intensity of oxidation by its interaction with hydrogen. The sustained increase in basal metabolic rate is not brought about by the decomposition of any one particular type of food, but hydrogen, which is a constituent of protein, carbohydrate and fat, appears to be the link between the increased energy produced and the various constituents of the body.

What we have shown through the substances closely related to thyroxin, we have also demonstrated with epinephrin and substances closely related to it,⁶ and I feel we can now assign a definite series of chemical reactions which are stimulated and made possible by the essential active constituents of these two glands.

When Kocher removed the thyroid in his first case of thyroidectomy, it did not make much difference to him whether the thyroid controlled protein metabolism or the rate of combustion of hydrogen. He was able to secure satisfactory surgical treatment for a condition which up to that time had not been successfully treated with surgery. After the lapse of thirty or forty years, however, it does make a difference to the surgeon and clinician whether the thyroid gland controls protein metabolism and it is of more than academic interest to know precisely all that the thyroid does influence.

SUCCESS FROM COOPERATION

Through the cooperation of surgeon, clinician, pathologist and chemist, the operation for goiter has been made highly successful, and the mortality has been reduced from between 5 and 10 per cent to less than 1 per cent.⁷ Also the medical death rate from hyperthyroidism is today practically zero whereas it used to be very high. In other words, patients died from hyperthyroidism before they were considered safe surgical risks.

What has been done with the thyroid may be done with the other glands of internal secretion. We cannot, as yet, treat Addison's disease successfully. In some cases, even the diagnosis is difficult, but it seems highly probable that in the near future a successful method of treating Addison's disease, based on the chemical reactions involved, will be produced.

Although the clinician has insulin with which

to treat severe cases of diabetes, no one can yet say exactly what insulin does within the body but I predict that when we do know the function of insulin expressed in terms of chemistry its use will be increased and safeguarded and it will have even wider application than today.

Eventually we shall look on the cell as the machine which utilizes these various agents within itself to maintain its health and vigor. In each particular type of cell the fundamental reactions produced by these substances are the same. Through its special differentiation the various cells have developed strikingly different expressions of their physiologic activity but the fundamental reactions involved are based on processes of oxidation. Cellular activity can only be carried on when the cell has the proper substances with which to work and receives the proper amount and the varied distribution of the necessary food products.

When the cell is viewed in this manner, the weight of the problem falls on the chemist and physicist, and I ask your earnest consideration and

your support for increase in the facilities for the chemical investigation of disease in general and the ductless glands, in particular.

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Cell Reactions in Resistance and Immunity*

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Hippocrates is responsible for the doctrine that "the physician is the servant of Nature and the patient must combat the disease along with the physician." No one of the great clinicians who followed him has appeared more conscious of the truth of this maxim, than Sydenham, who by following it became the prince of English practitioners in spite of his faulty theories of disease. Just what structures gave rise to this healing power of nature within the human body baffled the ancients. We with our modern minute research, are baffled to correlate the many factors that we find play a part in defense against attack and injury. Each investigator is inclined to overestimate the factor with which he is best acquainted, whether it be chromosomes, hormones, vitamins, light, circulation or leukocytes—unmindful that all are important but that exact correlation is necessary for the smoothly running machine. In the matter of defense I shall emphasize the unit cell and in particular the leukocyte.

Disease, in the sense of infection, is but a bio-

logical contest—the attack of living organisms upon living organisms. As such, disease far antedates man's appearance upon the earth. Long before, there had been attack, and defense had been developed. The primordial ancestor of the animal group, the amoeba, had developed a defense, which gained him immortality, that of engulfing and destroying the enemy within the body of the cell—phagocytosis. Through the evolutionary process leading to man and the higher animals this method of counter-attack has persisted, almost unchanged, as the primary defense against invading organisms.

As multicellular organisms developed from the unicellular, specialization in component cells began to take place, and for defense one finds the amoeboid wandering cell in the body spaces. With still further development in size and complexity of the animal forms a vascular system became necessary not only for nutritional purposes but also for defense. In the forms below the vertebrate series, the only cell carried in the circulation is the defense cell, the leukocyte, and even in many invertebrates the leukocytes have been differentiated into

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the various types we find in man and the lower vertebrates.

Thus, there has been developed an inner defense system against invading organisms—depending for its efficacy upon an adequate supply of leukocytes and upon a circulation competent to allow their mobilization at strategic points. There are numerous points at which this system may fail. That a failure in the competency of the heart or in the integrity of circulation would be a serious handicap to the system seems too obvious to require argument. That a failure in manufacture of a sufficient number of the proper kind of leukocyte is also a serious handicap, seems equally obvious now, although but a few years back it was suggested with considerable hesitancy that a lack of leukocytosis in certain infections as pneumonia, might have been a factor in the fatal outcome.

We are not now able to point out with certainty the function of each variety of leukocyte. Of the function of some varieties we have imperfect knowledge. Evidence points to the theory that the "special" leukocyte, the neutrophile in man is the primary agent of defense in attack by practically every type of infecting agent although in the course of many diseases it may not prove the most efficient agent. Further, a study of the blood in many conditions indicates that the neutrophilic leukocyte must be maintained above a certain number per unit volume of the circulation to prevent successful invasion by organisms constantly present upon our mucous membranes. When the number of cells in the circulation falls as a result of inhibition of manufacture or delivery from the bone marrow, as in measles, influenza, excessive X-ray exposure, the patient becomes prey to organisms already present and pyogenic complications, commonly a pneumonia, ensue, and often run a fatal course. It is a cell then of vital defense importance—acting through phagocytosis and digestion of living organisms, but it is not of importance in combating toxins or in manufacturing antitoxins or in passing on the ability to manufacture immune substances to succeeding generations of cells. It has no descendants; it is an end cell. The dictum has been established that no disease which runs its course with a neutrophile leukocytosis is followed by a lasting immunity, except scarlet fever and here another than the neutrophilic cell is apparently responsible for the immunity. For the great group of coccoid diseases,

where the neutrophile is most active, there is no lasting immunity.

The power of ingesting and destroying living hostile organisms is not confined to the neutrophile leukocyte but is held also by another cell or group of cells—cells more like the primitive phagocyte. This group includes the monocytes of the blood stream and members of the wandering and fixed endothelial cells. I shall not, here, enter into the controversy as to the unity or diversity of origin of this group of cells. For our present purpose they may be said to have a unity of function. In the body then one finds two great filters for the blood stream depending for their efficiency upon contact of the blood with endothelial cells. These are the spleen and the liver. In the former the blood passes through the pulp reticulum upon which lie endothelial cells. In the liver the stellate endothelial cells (Kupffer cells) stretch their processes across the blood capillaries and seize upon invading parasites as well as abnormal and injured cells of other types. Likewise all lymph returning from the body periphery filters through the sinuses and structure of at least one group of lymph glands where similar cells stretch their processes across the sinuses and lie upon the reticulum of the parenchyma. Further, in the so-called tissue spaces, there are similar wandering cells. Thus we have a deep defensive system of cells to combat organisms that escape the defense mechanism, the localized inflammatory reaction, at the portal of entry in the skin or mucous membranes. This group of cells is further active and efficient against bacteria with which the neutrophile appears relatively ineffectual. It forms the protective cell in our more chronic processes such as tuberculosis and the other infectious granulomata.

These two groups of cells appear to be agents of defense against living organisms. There is, however, another phase of attack which is not met by them. Attacking organisms liberate toxins. These toxins as well as organisms are carried away from a field of infection in the returning lymph or serum with which the inflammatory field has been flooded. Return is largely through the lymph stream and this lymph filters through lymph glands or lymphoid tissue. Here organisms and cells are engulfed by endothelial cells. The toxins are apparently affixed by the lymphoid cells. If in great intensity the toxins cause necrosis of lymphocytes; if in proper dilution, one finds not

necrosis, but stimulation and proliferation, with the production of antibodies. I realize that all will not agree with me that the lymphocytic series of cells produces the antibodies, yet all the pathological evidence I can obtain inclines me to that view. The position of the normal lymphoid accumulations, the grouping of lymphocytes, which are non-phagocytic cells, about the tubercle, the gumma and acute inflammatory foci forming a protective ring through which toxins must filter before reaching vital tissues; the curve of reaction in diseases followed by immunity; all these point toward a chemical function for the cell. Normally more lymphocytes enter the blood stream every day than are present at any one time. The majority of these appear to leave the blood stream and emigrate out of the body on to the intestinal mucosa (Bunting and Huston). We have hazarded the suggestion that these emigrated cells may account at least in part for the local immunity we possess to the toxins produced by the pathogenic organisms harbored in the intestine.

A striking example of the apparent difference in function between the neutrophile and the lymphocyte is furnished by the leukocytic reaction in scarlet fever. During the early days of the disease when there is violent infection of the mucous membranes there is a sharp neutrophilic leukocytosis. During this period there is a reduction in number of circulating lymphocytes. This lymphopenia is followed by a gradually increasing number of lymphoid cells until a sharp lymphocytosis is reached at about the end of the first week. As has been shown recently it is only in the second week of the disease, a period which follows this lymphocytic recovery, that antitoxin appears in the circulating blood. In this disease as in many others, tuberculosis, cancer, etc., if the lymphoid cell is not the immediately reacting cells, its number in the tissues and circulating blood is a measure of resistance to the infecting agent. With good resistance the number is high, with poor resistance, the number is low.

Lymphoid tissue is not equally potent in the two sexes, or at all periods of life. There is apparently a close relationship between the sex organs in the male and the lymphoid tissue and thymus. Specific diseases of lymphoid tissue are from two to three times more frequent in the male than in the female. The age relationship in the male apparently concerns the appearance of puberty.

In the five or six years before puberty lymphoid tissue is dominant and such diseases as Hodgkins' disease and tuberculosis are infrequent. Following puberty all lymphoid diseases increase in frequency, the resistance of the male is low, and his lymphoid tissue is less reactive apparently than that of the female. This period from 16 to 30 or 35 when the lymphoid tissue is physiologically depressed, is the great period for Hodgkins' disease, tuberculosis, typhoid fever, infectious mononucleosis, influenza—all lymphoid diseases. If one places smallpox among the lymphoid diseases, as he must from the blood reaction, the whole story of this variation is contained in the statement of Sydenham "As we all know in confluent smallpox, a young man in the prime of life stands less chance than a woman or a person under puberty."

Given a failure of the defense mechanism thus far described to eliminate the hostile force—there is an ultimate defense operative under a great variety of conditions, and that is encapsulation—the interposition of a dense layer of easily made connective tissue between the infected area and the vital tissues of the body. Not only does this tissue interpose for the absorption of toxins, cells that are not vital to the organism—but also by its contraction it tends to cut off the encapsulated area from oxygen and nutrition even to the extent of becoming a hyaline necrotic scar itself in its inner layers. Such is the defense against tuberculosis, cancer and many conditions where the organisms have perhaps a greater viability than virulence.

It may seem to many that these defenses are woefully inadequate, yet it must be remembered that they are so sufficient that but few of the many species of bacteria are able to survive at all within the body. It is to be remembered also that we as physicians are called on to aid the exceptional case where there is a break in defense and never see the thousand cases where even pathogenic organisms are unable to gain a foothold.

However, under some circumstances, local defense may break down and then organisms or toxins may escape into the blood stream subjecting cells of vital organs to attack. The question "what organ" is difficult to answer. The nature of the organism or the type of toxin may be a factor, yet there are other factors that must be considered—inheritance and local injury. Men are not test tubes. One cannot in a series of men put an ounce of disease and a pound of cure and

calculate the result. Given a uniform unsullied inheritance and it might be almost possible, but with varied inheritance, weaknesses develop in various organs and tissues and prediction is more than difficult. This is not a new idea. Our earliest medical forebears recognized under their humoral pathology the plethoric, phlegmatic, choleric and melancholic types that are still in our daily speech, and clinicians throughout the ages have recognized families in which some organ-system or tissue was defective in resistance to the wear and tear of life. It might be the cardiovascular, the renal, or the haemopoietic system; there might be an increased tendency to tuberculosis or diabetes or cancer or insanity. In other words, there is good clinical evidence that as a result of faulty inheritance individuals may possess organs of defective 'vitality,' which show deficient or excessive, but equally pathological reaction to the daily insults of life. Thus develop many of our chronic organic diseases of adult years.

But withal, the body possesses in these wandering cells, an efficient defense agent, depending it is true for their maximum efficiency, upon a status of the other organs and systems which constitute what is termed 'health,' and this dependent again upon a good inheritance, and the "six non-naturals" of the older writers.

With this natural system of defense given, the duty of the physician lies, in the words of Sydenham, "In joining hands with Nature and aiming properly at the same mark" if he would overcome disease.

DISCUSSION.

PRESIDENT CUNNINGHAM: Gentlemen, I know you have all enjoyed this wonderful exposition. It has given us knowledge and food for thought. If you have not already read the arguments in the program, I advise you to do so, and read them again later and read them again when you get home. We will all be better practitioners for having heard these talks which have given us knowledge in reviewing facts which we should know.

I am going to call upon Dr. Evans of La Crosse to open the discussion on these papers. Dr. Evans. (Applause.)

DR. EDWARD EVANS, La Crosse: As I look about this audience, I see very few that have been in the harness here for over thirty years as I have been. I am sure that it is a great stimulation to us to be here today and to have such a series of papers presented to general practitioners, as we all are, practically. For more than forty years now I have been a student of medicine, I hope a pretty faithful one, and I am glad that I have lived to be here today to see that the profession of Wisconsin has advanced to such a stage where we can have presented

to us a series of papers that would have been rather shocking twenty or thirty years ago.

I am not going to try to discuss the papers, but I want to draw to the attention of the State Medical Society of Wisconsin the fact that we have occasion today for great joy, that we ought to be jubilant for two reasons. We have a pair of twins belonging to us, properly conceived, grown properly in the womb of the medical profession of Wisconsin and brought forth with full vigor. Neither of them has been needled as Dr. Guyer has needled some of his embryos, so they have come forth in full vigor. The first of those is the Basic Science Law, a law for the first time written on the statute books of any state in our union, free from any criticism of doctors, drugs or any sort of thing like that; a law designed to protect the public against the charlatan, whether inside or outside of the profession.

The second twin that is so vigorous is the splendid program that has been prepared for us at this meeting. I am overjoyed that I have been given the privilege of seeing the Society of Wisconsin in its annual meeting put on such a marvelous program. It is very interesting to see at this time, when the religious or spiritual world is going around without anchor or bearing of any sort, that we of a scientific profession are profound fundamentalists. We are back to first principles and we are glad of it I am sure. I am not only glad that we are fundamentalists, but I am especially pleased today that our own university, perhaps for the first time that I can recall in the work of our state society, has taken the part it ought to take. I hope in the future that never again will our colleagues be found lacking in bringing to us the knowledge that they are prepared to give us from the state university. (Applause.)

I want to say to the medical profession, and I think you will agree with me, that this is not a high-brow program. It is presenting to us the very fundamental facts we must know if we want to be practitioners of medicine. Every practitioner who is faithfully and honestly practicing his profession does the same thing every day with the patient he sees that these scientists do in their work. When a patient comes to you, you must get all the information you can about that patient, by history and physical examination; in other words, you are acquiring facts. On those facts you base your hypothesis and then with careful consideration of those facts before you, you analyze and make a differential diagnosis, and then on this diagnosis, which also carries with it prognosis, you institute your therapeutics. In other words, you are carrying on an experiment and the result of your therapeutics proves to you whether or not you have been right, and you have a verification or otherwise of your problem that you have been trying to solve. So we are all fundamentally experimental biologists if we are honestly and faithfully and intelligently practicing our profession.

In this connection, I would like to bring home to you a remark of Pasteur, who once said, "The chance is to the prepared man." We must know our work if we are going to solve properly and intelligently the problems brought before us in our daily practice. True, it is, of course, that we can't all be scientists, we have to have

the pathfinders as well as the followers. We have to have the architects as well as the builders, so that we needn't feel bad if we can't do those fundamental experiments that were presented to us today, but we should keep ourselves in such state of intellectual activity by irradiation or otherwise that we will be able to apply those things to our practice. We are all idealists, or should be, in the practice of medicine, but it is not enough to be just idealists unless we are able in the practice of our profession to convert what is perhaps the greatest quality after all as practitioners that we can possess, and that is a sympathetic attitude toward our patients and toward our problems. We must be so intelligently prepared for our profession that we can convert that sympathy or that pity from an emotion into a motive and thus be able to give to our patients, to our clientele, whether humble or what not, the things that science has been bringing to us.

I know I have entirely failed to interpret this program as given to us today so ideally. To me every paper today has not only been a romance but a poem, and it has delighted me to see perhaps the most poetic of all of them presented by a young chap that I have watched from his babyhood, Dr. Bunting, who gave us such an ideal picture today of the pathology of the circulatory system and the protective organism provided by the blood. Because of my failure to do more than present to you my own feelings about this program, I take it that it is only fitting, Mr. Chairman, that we call on the Chairman of the Program Committee to interpret for us just what he had in mind when he brought such a splendid program for us today. (Applause.)

PRESIDENT CUNNINGHAM: I will be glad to call upon Dr. Yates, Chairman of the Program Committee, to give his idea and conception of the idea for this program. (Applause.)

DR. J. L. YATES (Milwaukee): Mr. Chairman, Guests and Members of this Society: First, I would like, on behalf of the men that really did the work, to thank you for your approbation. I also want to thank the six men that really did the work for permitting me, on account of the chairman's favoritism, in a way to preside over the actions of that group and to thank them also for this privilege of, in a way, being the bouquet catcher for the state committee.

We had two purposes in developing the program. The first one can be easily stated, that was to subject all of us to the enlivening, inspiring radiation that flows so uninterruptedly from that stalwart citizen, Dr. Carlson. He ate not wisely but too well apparently yesterday, and accumulated a colitis which prevented his traveling over from Michigan to be here today.

The other purpose possibly will take a little explanation, so please bear with me. Starting with the first premise that the aim of all therapy is to minimize disability, we move down to the next, namely this, that the normal cell activities which produce health and the morbid cell activities which result in the malfunctions, which are disease, are alike controlled by immutable biologic laws.

Then came a third, that recoveries from disease,

whether those recoveries be spontaneous or whether they be promoted therapeutically, are dependent upon three factors: the first, reduction in irritation; second, increments in the defensive responses to those irritations; and, third, that the total of reduction of irritation and of the defensive response is purchased by increased activity of cells which may not exhaust tissues which are fundamental to life.

The next step, therapy, if it is to be rational, must first reduce irritation; second, augment defense responses, and, third, conserve those energies of cells which are essential to existence. This rational therapy is the sole means to the end first stated, namely, the utmost reduction of disability.

Naturally enough came the next phase: how can this project be forwarded? The answer to that is immediate. As stated by Dr. Evans, it can only come through educational advances, but those educational advances, if they are to be effective, cannot apply merely to undergraduates, they must be post-graduates, they must be continuous; they may not be intramural in any university, they have got to be extramural.

Now we can get down to real hard-pan. That community whose physicians first comprehend the true significance of biology, that community whose physicians and teachers are aiming constantly to add to the knowledge of life, and not only aiming to add to the knowledge of life, but are striving constantly to devise methods and to adapt old methods so that the methods employed will conform accurately with the requirements of nature, so that they will never oppose and always cooperate with biologic laws, is bound to achieve medical leadership. What is the value of medical leadership to the community? The provision to its citizens of utmost protection of their greatest asset—health, sound minds and sound bodies. What will come to the profession? They will have deserved, they will receive their adequate rewards. The greatest of those rewards will be the development of a power which will permit them to advance the services of medicine, not only at home but abroad.

Another step. Being just a bit partisan, we felt that possibly there was no state so deserving of acquiring this leadership as Wisconsin. We knew that education was required and had to look at once for the tools to develop that education. We found the tool necessary; first, a state society which is extraordinarily well organized, whose affairs are being splendidly administered and whose members are above the average of intelligence and profit. The witness of this fact, and it is not an idle, sophistic flattery, is that this state society, unlike the sister societies in other states, is almost miraculously devoid of the blood untrue to all decencies and progress in politics. Now the members of this state society, whether we wish to admit it or not, can't escape this admission: we are the custodians today of the welfare of this community, we are the trustees of the welfare of this community in succeeding generations. If we are going to be faithful to our trusteeship, we shall be obliged to forward the interests of that other means to education upon which we have a right to call and

from which we have the right to make demands, namely, the State University.

That State University, years ago, demonstrated beyond a peradventure of a doubt its ability to confer benefits on the individuals, on the state and on the nation. It has lapsed, it has gone into a period of inactivity. Why? Directly in obedience to biologic laws. No cell, no individual, no collection of individuals or institutions may continue at high speed. Periods of inactivity must succeed and precede periods of hyperactivity.

The State University, for a considerable period, as we all have to recognize, has been in a period of inactivity from which it is about to emerge under the leadership and the inspiring leadership of the new president, who stands four-footed and squarely on one basis; that basis is the foundation of all legitimate education, namely, research. It is most fortunate that this certainly sturdy renaissance of the university is taking place coincidentally with the development of the third and fourth years at the university.

Our obligation seems clear. We must individually and collectively back President Frank and Dean Barden. We may disagree with them honestly, justly perhaps, in detail; we cannot disagree with them in the broad principles. The details can be remedied. The broad principles need only the backing of us to carry through. It is on this conception that we attempted a program today that we could put up, by the agency of the speakers, the big problems that are before the medical profession of the world and none the less before us—the progress of medicine. I think we have got an earnest attention to such a method through the attendance here today, through the attitude of the officers of this Association, and particularly evidenced by the cooperation that has come from the members of the faculty of the state university; whether they have been on medical faculties or not made no difference. They have all been willing and self-sacrificing to cooperate for the benefit of looking forward in medicine. The excellence of what they have presented alone suffices to guarantee what may be expected in the future.

Once more the Program Committee wants to thank every man who has contributed to the program, every speaker, every discussor, and those whose contributions could not be utilized. We have had unmistakable evidence throughout the state of the most wonderful cooperation, the most wonderful willingness to do everything possible within individual power and collective power to advance the cause of medicine. (Applause.)

PRESIDENT CUNNINGHAM: These papers are now open for discussion.

DR. G. E. SEAMAN, Milwaukee: I want to congratulate the Society upon this extraordinary wonderfully intelligent program. Dr. Evans states that it was not a high-brow program. It is not a high-brow program. I have had the privilege of some little acquaintanceship with the work done by Professor Guyer and Professor Steenbock and others at the University of Wisconsin. While I have had very little time to devote to it, the small amount of time that I have had to devote to it

has been very well repaid. It requires only a visit to the laboratory of those men to convince one that this line of work has a very practical application to medicine. We cannot practice medicine successfully without some knowledge of the laws of heredity and the facts of heredity.

We cannot look into the work that has been done in the biologic department of the University of Wisconsin on the subject of heredity without being impressed with the fact that this work has a very practical application to the practice of medicine. So with the work of Steenbock and others, a very brief visit to the laboratories of those men will convince you that we must take account of this kind of work if we are to continue to practice medicine in the best possible manner.

The matter of the relationship of light to the welfare of the human family, the matter of the practical application of light to the field of therapeutics, are things indicated very clearly by the work that has been done in the field of radio activity. The Society is to be congratulated upon this splendid program.

I want to touch briefly upon one other subject which bears a relation to this. You know that people who do not know, who do not put themselves in position to know are apt to be suspicious of the reason. Those who provide the funds are apt to be jealous of the fund that is expended for something which they cannot see. They are more willing to build a building or a road than they are to provide funds for experimenting and research, notwithstanding the fact that research in the field of agriculture, for instance, has so enormously increased the wealth of this state and research in the field of breeding, too, has enormously increased the wealth of this state. The farmer accepts that, the agriculturist accepts it, the average man accepts it and says it is very fine, but he would rather see something which he can understand and which he can appreciate like a building, for instance, than to see the funds spent for the vastly more important matters involved in research which touch the interests of the human family.

Only recently an incident occurred at the University of Wisconsin. The proposition was made to provide an educational foundation to provide some money for research in medicine. A discussion of that was held. This particular small fund was accepted because of the conditions that existed, but growing out of that the policy was laid down that in the future no funds would be accepted from educational foundations in the face of the fact that these educational foundations for medical research have done more for the human family, more for medicine in the last twenty-five years than was done in all the preceding centuries. Now that, of course, is an unenlightened action, it does not represent enlightened public opinion; it does not represent university opinion; it does not represent the opinion of the President of the University just retiring or the President of the University just taking over the position; it does not represent the intelligent opinion, certainly, of the Board of Regents; it is wholly at variance with any intelligent opinion on the part of any medical man

and, naturally, it being wrong, will not stand. (Applause.)

It seems to me that at this meeting the medical profession of Wisconsin should go upon record in this matter and give the people of the state their judgment and their opinion on the questions involved. Now this same question came up in the state of Iowa, and it was in a measure submitted to the people of the state of Iowa

and they voted the acceptance of money for this very purpose, ten to one. The press of Wisconsin is unanimous in its condemnation of this unenlightened action of a few members, recently appointed members, if you please, of the Board of Regents of the University of Wisconsin. So I hope that this Society will look into the matter and satisfy themselves that it is their duty to take a position upon it. (Applause.)

Care of the Insane*

BY H. H. CHRISTOPHERSON, M.D.,

Medical Director, Clark County Asylum, Colby

I thought it might be interesting to the doctors of Clark county and perhaps to others to know a little something of the insane of our state and county. The state of Wisconsin in its 36 county asylums has approximately 5,400 insane people, and we have about 3,000 more in our feeble minded home at Chippewa and our two state institutions.

I believe that our plan, of farming out as it were, all inmates of our state institutions, when the state institution has determined the patients are incurable is far better than the plan in vogue in some of the other states. Many of the states have large state institutions, where the curable as well as the incurable are cared for in large numbers.

A chronic insane person will oftentimes get along very nicely, be quiet, and peaceful, especially if associated with quiet and peaceful surroundings, and for that reason I believe that these people in our county institutions are better off, because they are in small units and do not come in contact with the violent insane that are often sent to the state institutions.

In this way we differ from some of our neighbor states. Illinois, for instance, has several large state institutions, and when a person is committed to an asylum they remain there until they are either cured or die in the institution. They necessarily are in much larger units than under the Wisconsin plan.

We have in our Clark county institution now about 270, of which about 100 came from the Feeble Minded Home at Chippewa. The rest are insane recruited from the different counties in the state. Eighty-one are residents of Clark county. These vary in ages from 16 to 88. We have six under 20 years, 16 under 30, 18 under 40, 14 under 50, 16 under 60, and 11 over 60 years of age.

Male and female are about 50-50. We have 10 epileptics, 15 cases of dementia praecox and 8 feeble minded. The other 40 cases are due to the various causes of insanity, which by some authors are summed up in two words, heredity and strain. Heredity seems to play a large part in the causation of insanity. Strain is multiform in character, comprising all of the stresses, physical and mental, direct and indirect, which may undermine the nervous constitution and bring it to the point of collapse.

The subject of insanity is a subject that I believe the general practitioner pays very little attention to and yet we are often called upon to determine and to testify as to whether a person is sane or insane and more particularly in three various instances: First, we may be called upon to testify whether a criminal is sane or insane, and a criminal, under our law, is insane if he does an act whose nature and quality he does not know, or if knowing the nature and quality of the act, he does not know whether it is right or wrong. Second, a testator is insane if his mind, memory or understanding is unsound. Third, in a lunacy inquiry the subject of the inquiry is insane if he is incapable of managing himself and his affairs. Such are the divergent tests of insanity in law.

The subject of epilepsy causes the attending physician, the superintendent and the attendants of an asylum more trouble than any other class of patients at the institution. They are not only a great care on account of the frequency of their convulsions, but they have many minor injuries, all forms of dislocations and minor burns. These accidents occur during an epileptic seizure. These various injuries must be cared for the same as like injuries in any other person.

Heredity plays a very important part in the cause of epilepsy. It is generally believed that alcohol and syphilis constitute very powerful fac-

*Read before the Clark County Medical Society, June, 1925.

tors in the causation of all hereditary defects and naturally epilepsy has been included. Epileptic fits are often due to some local irritation, for that reason every possible irritation should be thoroughly investigated; such as errors of refraction, nasal diseases, dental faults, gastro-intestinal disturbances, and auto-intoxications from any source. Any or all of these local irritations should be thoroughly investigated and eliminated in the treatment of a child beginning to have epileptic fits, and should likewise be looked after in every case of epilepsy. The social surroundings should be carefully observed. The patient should have pleasant surroundings. Excesses to a state of excitement in play or to a point of fatigue in work should be avoided. The rooms, ventilation, clothing, occupations, and habits of the patients are worthy of full consideration.

In general, diet should be regulated to conform with the individual need of the patient, all articles of food for which intolerance exists should be re-

duced, and every effort should be made to render it as bland, non-irritating, and highly nutritious as possible. The bulk should be carefully watched in order to avoid overloading; it is much more desirable to eat often than to partake of hearty meals at long intervals. All stimulants such as alcohol, coffee or tea should be strictly eliminated from the diet, or used in great moderation. Milk, fish, vegetables, and suitable fruit with a small amount of starchy articles, with very little meat, is the best for epileptics.

Various drugs have been tried for suppressing the number and severity of attacks. Of late years luminal has been greatly alluded to by some as an almost "cure all," but it is being fast discarded because of the depressive mental effect upon the patient. Large repeated doses make the patient stuporous. If used at all it should be in conjunction with bromides. Occasionally I feel that morphine must be resorted to for the suppression of violent and frequent attacks.

The Treatment of Finger Infections

By RALPH M. CARTER, M.D.

Green Bay

One of the most important tasks confronting the general practitioner is the proper treatment of acute inflammations of the fingers. Under present conditions of labor and employment, cases with diminished use of fingers or hand are frequently severely handicapped, especially those, who through loss of a finger are forced to take up a change of occupation, as for example, skilled artisans, pianists, stenographers, seamstresses, and the like. Thus, improper treatment in its ultimate results may have far-reaching consequences; and not infrequently the physician is blamed for a disastrous outcome. Furthermore, from an economic standpoint, these infections today constitute a weighty financial problem, not only for the patients themselves, but also for employers and insurance carriers. Consequently it is now necessary, more than ever before, to get the patient back to his work with as little loss of time as possible and with no permanent disability.

Permanent disability is sometimes unavoidable, in spite of the best and most energetic treatment. The patient may be careless and disregard his injury until constant pain forces it upon his attention; he may be one of those persons with an overdeveloped "fear of the knife," who puts his trust

in bread-and-milk poultices; whatever the reason, he does not apply for relief until irreparable damage has been done to the finger. Likewise, the infection may be one of unusual virulence, and progress rapidly in spite of treatment. Under such circumstances, the physician must simply do the best he can; the result will probably leave much to be desired from a functional standpoint, but no blame can attach to him.

On the other hand, the statement has been made by Koenig that in these infections of the fingers, as in no other commonly seen condition, is so much harm done therapeutically, with such bad results for the patient as a result of neglect. Undoubtedly, many cases are seen too late, and the results of the inflammation are serious; however, later, in the second stage, as it might be called, after the subsidence of the acute inflammatory phenomena, with good evacuation of the pus, the finger remains a bluish red, markedly swollen and stiff, and shows only very gradual improvement over a period of weeks. In such cases nothing is left but to amputate the finger, or if this is not done, to discharge the patient from further treatment, with extensive permanent disability remaining. While this outcome in a certain number of cases is un-

doubtedly unavoidable, yet in a great majority it is simply visible evidence of neglect and lack of attention to detail on the part of the physician in charge of the case. Whoever has seen the gratifying results which follow the careful, painstaking, and persevering treatment by means of early active and passive motion will be convinced of this fact. But for this to be successful, the earlier treatment must have been such as to preserve the integrity of the tendons, otherwise nothing will be of avail in restoring function. To discuss this treatment briefly is the object of this paper.

ACUTE AND SUPERFICIAL

Acute inflammatory processes of the fingers arise as a result of the introduction of bacteria into the tissues. Minor lacerations, cracks, abrasions, small injuries such as needle pricks, sliver wounds; in short, the most insignificant, often hardly demonstrable injuries of the skin covering may serve as a port of entry for the exciting organisms. These organisms are by far most frequently the common pus producers, such as staphylococci and streptococci, although occasionally, after trauma or as a result of hematogenous infection, others may enter into the question.

The superficial inflammations of the skin, particularly those about the nail, offer no difficulty, as a rule. In such cases, the indications for treatment are practically always plain. The focus of infection is freely opened by an incision under local anesthesia at the point of greatest pain on pressure, or at the point at which fluctuation can be demonstrated; frequently also avulsion of the nail may be necessary. Following this, immobilization of the finger, hot boracic acid fomentations or moist dressings of equal parts of alcohol and glycerine, soon bring about a subsidence of the inflammation and rapid recovery.

On the other hand, the infection, from the very beginning, may be situated in the deeper tissues; or it not infrequently happens that a superficial involvement may become progressively worse, extending deeper and spreading rapidly. In either case, this constitutes the first real danger for the patient, and is a demand for careful therapeutic management on the part of the physician. A successful result in the treatment of infections of the palmar surface of the fingers, after free evacuation of the pus is secured, cannot be obtained if necrosis of the tendons has taken place, conse-

quently every effort should be directed to preserving these structures intact.

To attain this end, what should be the method of procedure? If the height of the inflammation on the palmar surface is somewhere in or near the median line, a small incision, as mentioned above, is often sufficient. If, however, after a few days, it is seen that the infection, instead of subsiding, is advancing and invading the deeper tissues of the region, lateral openings become indicated, and the median incision should be abandoned. Granulations soon form in the latter, providing a good covering for the tendon, and all the requirements of good drainage are served by the lateral incisions. With free evacuation of the pus, with constant attention to see that drainage is maintained so long as necessary, and with the employment of hot fomentations, a successful outcome may confidently be expected. Prolonged soaking of the hand in hot, very dilute iodine solution morning and evening has also appeared to be beneficial, in my experience.

INFECTION OF BONES

It is very seldom that involvement of the bones or of the neighboring joints occurs. However, if infection of the bone should develop, sequestration should be waited for, while employing symptomatic expectant treatment. This, of course, provided that the infection is localized and remains so; otherwise more radical treatment may become necessary. After complete detachment, the sequestrum is removed through a lateral incision, using the utmost consideration for the tendon, and endeavoring to preserve the periosteum.

In infections of the joints, an early opening into the joint capsule should be made, in order to prevent destruction of the articular cartilages, with the formation of an ankylosis.

Unfortunately, not all of these cases of infection of the finger remain confined to a single phalanx; frequently the inflammation proceeds along the tendon sheath to the adjoining one. In such cases, early prophylactic lateral incisions are urgently indicated. No harm can be done by making these too early, while delay may render it impossible to avoid disastrous consequences. The inflammatory process in this region is limited by the more or less markedly distended tendon sheath; the pressure, the absence of air, and the frequent presence of more or less blood, furnish ideal conditions for the growth of anaerobic bacteria, by which the

tendon is in imminent danger of being attacked. If good drainage is secured by sufficiently deep lateral incisions opening up the tendon sheath, the healing process will usually proceed satisfactorily under immobilization, hot fomentations, passive hyperemia, and prolonged bathing of the hand.

A point which should be emphasized is the importance of keeping the lateral drainage incisions open sufficiently long; this may be furthered by irrigation with hydrogen peroxide, sterile normal saline solution, or other mild antiseptic. The more irritating agents, such as bichloride, have no place in the treatment of this condition, and should never be used. In my own work, I am partial to hydrogen peroxide; through its liberation of oxygen, it acts as a chemical disinfectant, and the foaming produced has a tendency to cleanse the wound mechanically, bringing away any shreds of necrotic tissue which may be present. Against its employment, the objection may be urged that this same foaming in the deeper tissues may have the effect of further disseminating the infection; I believe this to be more theoretical than real, and it certainly will not occur if the drainage is as free as it should be.

RESTORATION OF FUNCTION

Under this treatment, after some time, perhaps two or three weeks, in severe cases even longer, the inflammatory condition will probably have subsided. The tendon has been saved, but as yet not its function. The task of restoring this function now confronts us, and this constitutes the final, but by no means the least important stage of the treatment.

For the management of this last stage we must depend upon: first, and most important, active and passive movements, and second, as an adjunct, diathermy.

No argument should be necessary to convince anyone of the value of active and passive movements in this, or similar conditions. Their employment means a useful finger, in the great majority of cases; their non-employment, a finger which is stiff and of little use, and frequently fit only for amputation. The question presents itself: At what time shall these movements be begun? If we wait too long, in spite of the fact that the inflammation has been overcome, the tendon will have become so adherent to surrounding structures that a great deal of improvement cannot be hoped for. In order to prevent this, active and passive

movements, particularly the latter, should be begun at the earliest possible moment after subsidence of the inflammation. Occasionally, following this treatment, we will see a lighting up of the infection, with entrance of bacteria into the lymph channels, and evidenced by increased pain, possibly some swelling and redness, and sometimes lymphangitis and regional lymphadenitis. This should occasion no alarm, and the condition is easily controlled by symptomatic treatment and temporary immobilization.

In connection with this use of active and passive movements, it is my opinion that diathermy renders distinct service; if it is ever indicated, it is in just such conditions as the one under discussion. I am well aware that I am here entering upon debatable ground; many physicians are apparently so enthusiastic over its effects as to regard it as a cure-all, to be employed for everything; on the other hand, there are many who can see no good in it at all, and who regard it as a device of quackery, and to this latter group I formerly belonged. However, experience has proven to me to my satisfaction that diathermy is of value where heat is indicated; its effects are due to the heat produced, and to nothing more. And this heat is therapeutically more active because it is produced in the tissues where it is needed. External applications of heat cannot begin to exert so marked an effect, otherwise they would serve just as well. Consequently, diathermy is a valuable adjunct, (and nothing more), in the employment of active and passive movements, in that the heat produced by it tends to promote the absorption of exudates, relieves pain, allows adhesions to stretch, and thus materially shortens the period of disability.

Phlegmonous processes on the dorsum of the finger are relatively infrequent, and consequently are of less practical importance; when they do occur, they should be treated as outlined above.

In this brief paper, I have had principally in mind the treatment of infections of the tendon sheaths of the fingers. On account of the anatomical arrangement of the flexor tendon sheaths of the three middle fingers, ending as they do at the heads of the metacarpals, extension of the infection to the palm of the hand and beneath the carpal ligament to the forearm is unusual; but it occurs not infrequently in the case of the thumb and little finger. Such palmar or forearm abscesses, on

account of the extent of the inflammation and the ever present danger of loss of the extremity, and sometimes of life, belong unconditionally in the hospital under the care of a surgeon.

BASIC SCIENCE QUESTIONS

The following questions were given by the Basic Science Board in its examination of September 18th at Madison. It will be remembered that passing the Basic Science Board, either by reciprocity or examination, is now a prerequisite in Wisconsin to licensure in any branch of treating the sick.

HUMAN PHYSIOLOGY

1. What is muscle tonus? What are the characteristics of fatigue in an isolated muscle?
2. Discuss the conduction of a nervous impulse.
3. What is the origin, function, and fate of the red blood cells? Of the polymorphonuclear neutrophils?
4. Choose one of the following subjects and discuss it: (a) blood coagulation; (b) the regulation of the pH of blood; (c) hemolysis.
5. What are the factors involved in the maintenance of blood pressure?
6. Discuss the origin and conduction of the cardiac impulse.
7. What is the significance of a high basal metabolic rate? How is the basal metabolic rate measured?
8. What are hormones? Name four important hormones, indicating the gland from which each is derived, and note the action of each. Which have been isolated in chemically pure form?
9. What are the functions of the liver? Of the kidneys? Of the medulla oblongata? Of the semi-circular canals?
10. What is your opinion of the comparative merits of lecture and laboratory instruction in physiology? What do you think of the status of physiology as an experimental science?

PATHOLOGY

Write on (a) or (b) of each question.

1. (a) Infarct—Definition, causal factors, pathology, fate. (b) White thrombus—Definition, location of formation, causal factors, structure, fate.
2. (a) Pathological pigmentation with hemoglobin derivatives—Types of pigment and conditions under which they occur pathologically. (b) Pathological pigmentation with the melanins.
3. (a) Describe in detail the healing of a sterile surgical incision. (b) Describe the reaction of the body to amsterile haemorrhage within its tissues.
4. (a) Describe the epithelial tumors of the skin. (b) Sarcoma of bone.
5. (a) Describe the reaction to an acute infection of a serous membrane. (b) What is the common etiological agent, and the pathological picture in the so-called phlegmonous inflammation?
6. (a) What is the pathology of actinomycosis? (b) Describe the series of phenomena which follow the

lodging of a group of tubercle bacilli in a capillary vessel.

7. (a) Amyloid—nature of substance and pathological occurrence. (b) Simple hyaline.
8. (a) What evidences of malignancy of a tumor are found (1) in the patient, (2) in histological section of the tumor? (b) What is meant by metastasis of a tumor? How may metastases occur?

HUMAN ANATOMY

1. (25 points.)
 - a. Give a general discussion of muscles (10).
 - b. Name all the muscles used in ordinary respiration and give their nerve supply (10).
 - c. Name the muscles of the orbit and give the nerve supply of each (5).
2. (25 points.)
 - a. Give a general discussion of nerves including structure, general function, etc. (10).
 - b. Name the nerves supplying each of the following, and if a cranial nerve give the foramina through which it passes (15).
 - (a) Teeth of upper jaw.
 - (b) Cochlea.
 - (c) Heart.
 - (d) Duodenum.
 - (e) Kidney.
3. (20 points.)
 - a. Give a general discussion of joints (10).
 - b. Describe the shoulder (humero-scapular) joint and give axes of movement (10).
4. (20 points.)
 - a. Discuss the circulatory system (10).
 - b. What arteries enter the cranial cavity to supply the brain, and what is the main vein carrying blood away from the brain? (5)
 - c. What arteries and veins are associated with the liver, and how? (5)
5. (10 points.)
 - a. What structures are found in the axillary fossa? (5)
 - b. Describe the large intestine giving its divisions and its peritoneal relations (5).

DIAGNOSIS

(Answer any five of the following questions and only five, numbering answers to correspond with questions.)

1. By what physical signs and symptoms would you recognize appendicitis?
2. (a) In chronic heart disease when would you consider active exercise safe? (b) When would you advise passive exercise?
3. What are the diagnostic signs and symptoms of toxic goitre?
4. Differentiate between intercostal neuralgia and early pleurisy.
5. On what would you base a diagnosis of: (a) Scarlet fever? (b) Measles? (c) Diphtheria? (d) Small Pox?
6. By what means would you arrive at a diagnosis of chronic nephritis?
7. Differentiate between digestive disturbance with gaseous distension and pregnancy.

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SERVICE AVAILABLE

There is listed the following definite services that are available to our readers—the members of the State Medical Society of Wisconsin. If you have a need not covered here address the Secretary, Mr. J. G. Crownhart, 558 Jefferson Street, Milwaukee. "Let George do it."

FOR THE MEMBER

1. *Package Libraries* are now available on Cancer, Schick Test, Vaccination, Periodical, Physical Examinations, Insulin, Fractures of Long Bone, Protein Treatment, Control of Communicable Diseases, Goiter, Digitalis, Pneumonia, Diseases of the Knee, Encephalitis, Asthma, Epilepsy, Meningitis and Scarlet Fever. Address Package Library Department, Extension Division, University of Wisconsin, Madison. Material on other subjects compiled upon request.

2. *Medical Books* will be loaned by the Medical Library, University of Wisconsin, Madison, Mr. Walter Smith, Librarian. Order through local library where possible.

3. *Physicians' Exchange Column* is open to all members without charge.

4. *New Scientific Publications* listed in the Book Review columns of this Journal are available for inspection by the members. They are in the Medical Library, University of Wisconsin, Madison. Place your order through your local library where possible or address Mr. Walter Smith, Librarian.

5. *State Laws* and departmental rulings can be secured through the Secretary's office.

6. *Legal Advice* upon questions pertaining to the practice of medicine will be given in so far as is possible. A complete statement of the question or facts must be forwarded.

7. *Inquiries.* Any inquiry with reference to pharmaceuticals, surgical instruments or any other manufactured product which you may need in home, office, sanitarium or hospital, will be promptly answered. Address all inquiries to Wisconsin Medical Journal, or write direct to Cooperative Medical Advertising Bureau, 535 North Dearborn Street, Chicago, Illinois. The Bureau is equipped with catalogues and price lists and can supply information by return mail.

FOR THE COUNTY SOCIETY

1. *Program Material.* Pursuant to authorization by the 1924 House of Delegates the Secretary is arranging to make program material available without cost. The following can now be secured:

A. Departmental Officers of the State Board of Health. Address Dr. C. A. Harper, State Health Officer, State Capitol, Madison, Wis.

B. Clinicians of the Wisconsin Anti-Tuberculosis Association when in vicinity. Address Clinic Dept., W. A. T. A., 558 Jefferson Street, Milwaukee.

C. Councilors and Officers of the State Society. Address the individual.

2. *Annual Statements.* Uniform annual statements can be had without cost. Address the Secretary, advising number desired.

EDITORIALS

CHRONIC DISEASE

MEDICAL science has made great progress during the past third of a century and well it should, to maintain its place in the march of civilization.

During this period many of the communicable diseases have almost disappeared from the list of enemies of mankind and all have been deprived of much of their virulence by both preventative and curative measures. A retrospect of the practice of medical men still in the ranks reveals a marked change in the type of cases coming for treatment and a greater change in applied therapeutics.

Acute disease, except in certain epidemics, provides only a very small part of the work the physician is called upon to do, and while preventive medicine, if it could fulfill its ideas, might prevent microbial disease, yet it is too much to expect that mankind will change its mode of living so that its three score and ten years may be reached without interruption by accident, influences of heredity, habit, or absence of harmony in the activities of the various parts of the human mechanism.

In the analysis of experience or in the light of present observation we see no indication that the future will have less need of the physician than the past. If possible, more will be expected of him, broader fields will be open to him and far greater rewards await him if he depart not from that altruistic spirit of service to his kind which has made the true physician revered of all time.

Refinements of diagnosis made possible by the clinic and the laboratory with therapeutic exactness which may logically follow, places the medical profession on a higher plane than it has ever occupied before, and the opportunities afforded by hospitals and sanatoria for carrying out curative measures make the healing art one of the most attractive of human pursuits.

The physician of today will do well to recognize in chronic disease a field worthy of his highest scientific endeavor and one of never ending variety or interest, and must not let himself believe that because typhoid and other acute diseases are disappearing there is to be no work for him to do. The physician of tomorrow if he be equal to his task will find himself as busy as the doctor of yesterday.—J. M. D.

COOPERATION

A DEFINITE attitude toward public health, or the health of the public is slowly but definitely crystallizing. In a simple society in which there is little social intercourse, where the individuals live comparatively isolated lives, the question of the health of the people is less acute than is the health of the individual. The complex society in which we now live, the interdependence of the people of any community, the intimate contacts of people living at great distances from each other have necessitated means of control, not only for the individual members, but for society itself. So that at the present time public health is no longer merely an affair between the physician and his patient, but requires the more complex and more complete machinery of health departments, including health officers, public health nurses, sanitarians, statisticians, laboratory technicians, etc. This development has been more rapid than the interpretation of the new instruments of control have been. Occasionally, therefore, it is natural that some misunderstanding should arise between the private physician and this machinery, but the machinery itself requires time for adoption.

Specific illustrations may help to clear away the occasional misunderstandings. Take for instance the school nurse in the community. By law she is required to do certain things in cooperation with the health department and the school board. Where there is no school physician this includes the inspection of the school children. The nurse within the limits of her training makes such inspections and recommendations as she thinks will further the health of the child. In her public health training she has been taught to recognize to some extent the normal child as well as the abnormal child. Obvious deviations from the normal are referred to the family physicians. This is the only thing the nurse can do. When a child, accompanied by his parent takes the recommendation and goes to the physician, a splendid opportunity presents itself to stress the importance of keeping the body machine in good working order, as parent and child come in a receptive mood.

Until recently, most of the physician's education and training has been devoted to the acutely ill so that it sometimes happens that not only little in-

terest is shown in the examination of the child referred by the nurse to have physical defects considered, but the physician occasionally speaks disparagingly of the recommendations for a medical examination which the nurse has made. Nurses are not qualified, or do they presume to pass judgment upon the recommendations made by physicians after a thorough examination, but where no examination is given, skepticism on their part as to the value of medical advice based upon no examination is quite natural. When children have been intimately exposed to communicable diseases, such as diphtheria for instance, and are referred to the family physician for culture, observation or immunization and advice, it is to be expected that the physician will appreciate this opportunity to protect his patients and the public.

Fortunately there is very general cooperation between the public health machinery and the medical profession, and rarely do we find practitioners who object to preventive health campaigns as are illustrated in the example of goiter, diphtheria, and smallpox. Private tutors and instructors in education who oppose community methods for the prevention of illiteracy, would doubtless furnish a parallel situation to such as are encountered.

There are, however, two sides to the story of cooperation and there are occasional violations of professional ethics on the part of the public health nurse, who in her enthusiasm sometimes apparently goes beyond the jurisdiction of her field. It is not the policy of public health agencies to permit a nurse to make positive diagnoses, treat or advise treatment or to recommend individual physicians or certain specialists.

When she does any one of these things she is definitely overstepping the bounds as outlined. On the other hand, physicians do not hesitate to recommend nurses who do good work and neither do they hesitate to speak truthfully about those whose work does not please them.

Still another instance of misunderstanding between the physician and the public health nurse may be found in that of misinterpretation which frequently occurs. As the physician is sometimes misquoted, likewise the public health nurse too is frequently misquoted by the public. Before assuming the truth of unethical statements said to have been made by the nurse would it not be better to extend to her the same courtesy and ethical attitude as is shown fellow-physicians until

she has been given opportunity to explain the facts.

The enumerating of these possible variations does not indicate that the situation is bad or serious. Quite the contrary. When considering the rapid development of the public health machinery the surprising thing is not that difficulties should occasionally arise, but rather that there are so few. In the best interests of the public, it is imperative that a very real effort be made by every group who, by virtue of education and experience is capable of making a contribution to the health of the individual and the health of society as a whole.—C. A. H.

A NEW ERA

WE are apparently pretty close to the end of the string of possible accomplishments in the way of preventing diseases by sanitary engineering methods. This does not mean that there does not remain a large number of cleanup jobs in the way of pure water supplies and sewage disposal measures, but merely that what remains to be done in this direction will be primarily in the way of promotion and finance. Sanitary engineering science is well established and its methods are fairly well standardized. From a scientific research point of view, it seems near to completing its cycle.

It is quite different in the other great field of preventable diseases—those spread from individual to individual without an intermediary in the way of man's surroundings—the things he touches and that touch him. As has been well stated, we have come to the era in public health promotion in which *people*, not *things*, will need to be controlled. This is a very important consideration for, and presents a great challenge to, the individual medical practitioners.

Whereas in the past, major attention has been given to big public service projects, attention in the future will be increasingly directed to very personal problems. Instead of the *community* being the sanitary unit, the *family* will become such. And just as epidemiologists have inspected lakes and streams, streets and alleys, houses and rooms for sources of disease spread and means of control, so will private physicians increasingly search lungs, tonsils, teeth, hearts and kidneys for signs of disease outbreaks in order to prevent their spread

beyond control. In-so-far as they do this will they supplant health department employees.

We sometimes think the public is better prepared for this new era in medicine than are many of us physicians because their demands for periodic physical examinations and "overhauling" seem livelier than the response. If this be true, it is an absurd situation, comparable to that of a not over busy merchant grudgingly passing out his wares to a clamorous clientele.—H. E. D.

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TYPHOID FEVER COMPLICATED BY PARENCHYMATOUS AND FATTY DEGENERATION OF THE LIVER— A CASE REPORT*

BY WILLIAM S. MIDDLETON, M.D.

Madison

The common complications of typhoid fever, hemorrhage and perforation, are so familiar to the general practitioner as to constitute the background for much of the dietetic and general treatment of this condition. Bone involvement, cholecystitis and thrombosis are less common complications of typhoid fever, but their clinical recognition is not infrequent. Degenerative changes in practically every vital tissue, ranging from cloudy swelling in liver and kidneys to the hyaline degeneration of voluntary muscle, are usually determined only by anatomic or histologic study. The confusion induced by parenchymatous and fatty degeneration of the liver in the following case of typhoid fever leads to its presentation.

L. T., a white male, aged 52, nursery-man by occupation, was admitted to the Bradley Memorial Hospital on July 21, 1924, complaining of fever.

H. P. I. Ten days previously the patient had been awakened from a sound sleep in a drenching sweat. This experience was repeated for the next three nights. Early fatigue and weakness supervened. There was no chill. The temperature ranged from 100° to 102° F. until admittance. At the onset the patient thought he had caught a slight cold, but felt no sore throat and had no cough. Pain, indefinite in nature, has continued in the back for several days.

*From the Bradley Memorial Hospital, University of Wisconsin.

Three days ago sugar was found in the urine in the course of a routine examination. While ordinarily fond of sweets, has since the discovery, restricted his carbohydrates. At no time has there been any polydipsia or polyuria. However, there has been occasional nocturia and slight burning on urination.

P. M. H. Measles, mumps, chicken pox, scarlet fever and whooping cough in childhood. Cervical lymph nodes removed when a child. Patient describes an illness similar to the present in childhood—pain in the back, fever and general weakness—diagnosed as "inflammation of the kidneys." Recovery from this illness was apparently complete.

S. H. Without bearing except for the fact that occupation has taken him out of town repeatedly recently.

F. H. Irrelevant.

Physical Examination revealed the following abnormal findings: Apathy, retracted spongy gums, injected pharynx, postoperative scar of cervical adenectomy, enlarged area of cardiac dullness, feeble heart sounds, systolic apical murmur, umbilical hernia, palpable liver and spleen.

July 21, 1924—Blood count: Hemoglobin, 95%; erythrocytes, 5,280,000; leucocytes, 8,000. Differential count: Polymorphonuclear neutrophils, 51; eosinophiles, 0.6; basophiles, 0.6; small lymphocytes, 41.4; large lymphocytes, 5.2; large mononuclears, 1; lymphoblasts, 0.2. Urinalysis showed a slight trace of glucose and a trace of acetone with two hyaline casts.

July 22, 1924—Slightest trace of sugar in each of the two-hourly specimens of urine. Blood chemistry showed no protein end-product retention.

July 24, 1924—The continuance of fever with a relatively slow pulse and lassitude suggested typhoid fever. Phenolsulphonethylalein output, 65% in 2 hours. Blood chemistry: Non-protein nitrogen 33.6 mgm. per 100 c.c.; uric acid 3.1 mgm. per 100 c.c. Blood Wassermann: Negative. Widal reaction: Negative for B. typhosus, para A and B. Leucocytic picture unchanged.

July 25, 1924—Suspicious macules have appeared on the lower chest. Tongue is heavily coated. Apathy is more pronounced. Leucocytes rose to 12,800 with a shift in the formula to 47% polymorphonuclear neutrophils with 51.2% lymphocytes. The blood sugar was 144 mgm. (per 100 c.c. of blood).

July 26, 1924—B. typhosus has been isolated from blood cultures taken on July 24 and July 25.

July 27, 1924—Irrational. Skin is leaky. Showers of rose spots on lower chest and upper abdomen. Leucocytes, 6,400, with 68.6% neutrophils.

July 28, 1924—Extremely toxic with circulatory weakness. No tympanites nor rigidity. Blood sugar—333 mgm. (per 100 c.c. of blood)—subsequent to intravenous glucose injections supported by insulin. Patient died at 2:45 P. M.

The febrile course was unusual in its range from 99.8° F. on the day after admittance to 105.6° F. on the morning of his death. The diurnal fluctuation was from 1.4° to 3°. A disproportionately slow pulse was recorded until the day before death. Diarrhoea was never a disturbing symptom and epistaxis occurred but once

in the course of this illness. Sugar was found constantly in the urine throughout the period of hospitalization in amounts varying from the slightest trace to very heavy reduction. Acetone was present in traces in all specimens up to the day of death, when none was determined.

At autopsy the following anatomic diagnoses were made:

Typhoid fever.

Cardio-vascular system: Heart-dilatation of the right ventricle; obsolete pericarditis (soldier's patch); mitral valvulitis. Aorta—athero-sclerosis.

Respiratory system: Emphysema.

Gastro-intestinal system: Liver—fatty and parenchymatous degeneration. Gall bladder—cholelithiasis. Intestines—lymphoid hyperplasia of follicles and Peyer's patches; ulceration of ileum with hemorrhage.

Genito-urinary system: Kidneys—chronic diffuse nephritis. Bladder—acute cystitis with small areas of necrosis.

Spleen and lymph nodes: Acute splenic tumor; mesenteric lymphadenitis.

The gross tissue changes, except for the liver, are without bearing in the present consideration. The liver was definitely enlarged, weighing 1960 grams. In color it was a pasty grey. The capsule was dull and lacking in luster. The organ cut with decreased resistance and the cut surface presented an unusual pallor with total loss of normal architecture. The impression of a "seared or cooked" tissue was gathered from gross study. The liver was very friable.

To histologic study the liver parenchyma presented a marked degree of cloudy swelling with extreme fatty de-

generation (Figure 1). Islands of focal necrosis and of round cell infiltration completed the picture of severe liver injury. In passing, it should be remarked that the pancreas displayed no pathologic changes to gross or microscopic study.

This case is of unusual interest from a diagnostic standpoint in the light of its clinical course and the ultimate pathologic findings. The manner of onset was unusual for typhoid fever. Yet from the stage of the intestinal lesions the history of a profuse night sweat ten days prior to admittance would accurately denote the onset of the disease, since ulceration is anticipated in the latter part of the second or the beginning of the third week. The occurrence of hyperglycemia and of glycosuria were misleading, and their true significance was not appreciated until the cause of the pyrexia became apparent. A study of the hepatic lesion renders the explanation for these unusual manifestations apparent. In the total absence of demonstrable pancreatic pathology a failure of the proper glycogenetic function, dependent on liver injury, would readily account for the hyperglycemia and glycosuria. The hepatic changes described in this case have long been recognized as a component of the pathology of typhoid fever. Apparently impairment of the sugar function of such degree as here recorded must be unusual in typhoid fever.

FOREIGN BODIES IN URETHRA AND BLADDER—REPORT OF A CASE

BY B. H. HAGER, M.D.

Madison

Foreign bodies in the urethra and bladder are not an unusual finding in routine urologic studies.

The following case is reported because of the extraordinary variety of objects that can be harbored in the posterior urethra and bladder without producing distressing systemic and local symptoms.

History 1983, N. G., white male, age 61, an inmate of the Mendota State Hospital, was admitted to the Wisconsin General Hospital because of frequency of urination. Social history and past history of no consequence except for an attack of urinary distress about ten years ago, at which time he had frequency and nocturia. These symptoms continued for two years and on consulting a physician a diagnosis of bladder stone was made and a large stone removed. Symptoms subsided until December, 1924, when he began to have diffi-

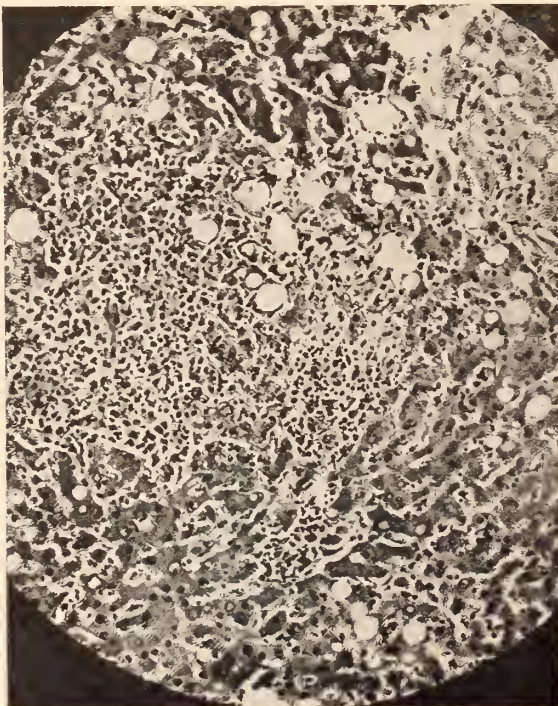
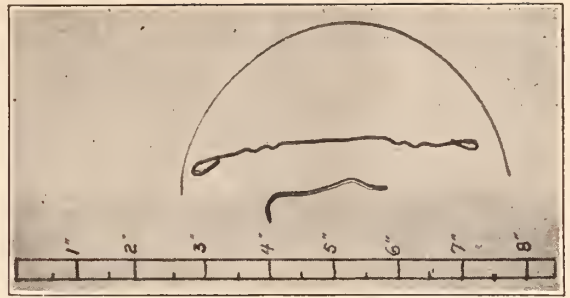


FIGURE 1.



Radiogram showing foreign bodies in urethra and bladder.

culty in passing urine. He believed he had a stricture and passed "watch springs" and hairpins into his urethra. Soon after introducing these



Objects removed by means of cystoscope from urethra and bladder. (Dimensions are in inches.)

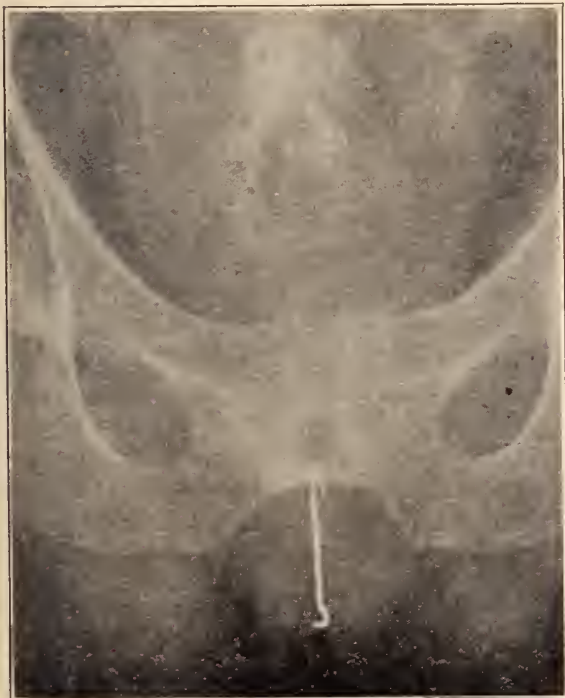
foreign bodies he was able to pass a good stream, but experienced pain in the bladder region which was associated with dysuria. On admission his general physical findings were negative except for a chronic bronchitis. Urine examination showed alkaline reaction with considerable number of red and white blood cells. Other laboratory reports negative. Radiogram of the pelvis showed multiple foreign bodies in the region of the posterior urethra and bladder. On April 27th under sacral anesthesia the following articles were removed through a Braasch cystoscope—one curved watch spring measuring 20 cm. in length and one-half cm. in width, one hairpin 11 cm. in length. These objects could be plainly seen in the posterior urethra. Upon their removal an X-ray was made which showed a curved hook remaining. The patient was re-cystoscoped and the wire hook was seen firmly hooked into the anterior wall of the posterior urethra. This was removed with difficulty resulting in considerable trauma to the urethra. It measured 6 cm. in length and it resembled a barbless fish hook. Cystoscopic examination following removal of all the objects showed a marked cicatricial urethritis with urethral deformity from multiple strictures. Diffuse cystitis was present in left and right base and trigonum with considerable cystitis cystica surrounding the right ureteral orifice.

In spite of the traumatization to the urethra caused by the removal of the wire hook, patient made an uneventful recovery.

EPHEDRINE*

BY K. K. CHEN, M.D.

Dr. Chen introduced his topic by outlining the therapy of native Chinese doctors, stating that few Chinese drugs were used and that these few were



Radiogram showing hook fixed in posterior urethra.

*Summarizing paper before University of Wisconsin Medical Society, Oct. 14, 1925.

popular because they were harmless. A second group of drugs such as musk and ginseng were used for their psychic effect in the wealthy class of patients and were effective because of their high cost. A third group are used cautiously because of their supposedly toxic action. Ma Huang (*Ephedra vulgaris*—var. *helvetica*) is among these and Dr. Chen elected to study this drug because of its supposedly extreme toxic and diaphoretic action. Indeed, for 5,000 years this plant has been used because of this latter property. Dr. Chen showed slides to illustrate the gross and histologic structures of the plant, the stems of which are the source of the active principle, ephedrine, and which was first so named by Nagai in 1887. Synthesis of this preparation has been attempted. The identity of the structure isolated by the speaker was established by its melting point and by the melting point of its hydrochloride.

Until the recent work of Chen and Schmidt the knowledge of the pharmacologic action of ephedrine has been very meager. A solution applied to the rabbit's eye gives dilatation of the pupil, but the light reflex is not abolished. Pilocarpine or physostigmine contraction is not abolished by the antecedent action of ephedrine. The dilatation effected by ephedrine is further augmented by the subsequent application of atropine. The uterine muscle either in situ or isolated is contracted by this alkaloid. The intestine is relaxed and peristalsis inhibited. Vaso-constriction is definite after the use of ephedrine. The intact bronchial musculature is apparently little influenced but spasm of the bronchus incited by pilocarpine and physostigmine is relieved by the use of ephedrine. Like adrenalin this drug acts upon the sympathetic system directly rather than upon the parasympathetic system or the central nervous system.

Intravenously ephedrine will lead to a rise of blood pressure not as great as adrenalin perhaps, but certainly much more persistent. The effect is not cumulative and successive doses of ephedrine are not attended by increasingly greater responses in elevation of the blood pressure in anesthetized animals, the effect upon blood pressure apparently wearing out. In the human being two to three mgm. per kilo of body weight will maintain an elevated level of blood pressure for from two to five hours. This effect is produced by all routes of administration—oral as well as parenteral. In anesthetized animals the pulse

has practically always increased with the increase in blood pressure, but this circumstance is not true in the conscious human being. Practically invariably decrease in the pulse rate attended the rise of blood pressure. Dr. Chen outlined the action of ephedrine on the kidney and on the heart. In the latter instance by certain unique experiments in the direct application of the drug to the stellate ganglion he established evidence of increased amplitude and increased pulse rate which could not be repeated if the ganglion was previously paralyzed by the application of nicotine. However, even though both stellate ganglia were paralyzed by nicotine, the intravenous injection of ephedrine would give rise to an increase in blood pressure. Perfusion experiments demonstrated increased amplitude and frequency of cardiac action after very dilute (1 to 100,000) ephedrine were used, whereas depression occurred when stronger (1 to 10,000) solutions were used. However, if the strength of ephedrine were sufficiently increased auricular and then ventricular fibrillation supervened. Colloidal solutions, such as horse serum, and the further addition of hemoglobin to the perfusing solution reduced this depressing effect. Evidences of bundle branch block were observed in toxic doses. Sino-auricular to auricular block was a tendency.

In summarizing the cardiac action of ephedrine Dr. Chen stated that there were probably three factors, namely—stimulation of the stellate ganglion, stimulation of the sympathetic nerve endings or of the neuromuscular junctions and lastly depression of the myocardial structures if large doses were used. Definite increase in the urine and lymph flow were remarked with less evident increase in the gastric secretion. Very little influence on the salivary flow and no influence on bile, sweat or pancreatic secretions were noted.

In summarizing the clinical observations, Dr. Chen pointed out the suggested clinical uses. In certain cases of surgical shock definite improvement has been shown. Experiments in histimine shock had noted response by an increase of blood pressure on the administration of ephedrine. Addison's disease has been so treated and one case in the Peking Union Medical College Hospital had apparently responded favorably. The low blood pressure of infectious diseases might likewise be so treated. Asthma has responded in a certain percentage of cases to the continued and emer-

gency use of the drug. A large group of cases of nasal conditions reported by Fetterolf showed marked vaso-constriction upward of two hours after the local use of solutions of ephedrine. There was no subsequent irritability nor reactions as are seen after the use of adrenalin. Urticaria and serum sickness have been favorably influenced.

Dr. Chen concluded his remarks by a discussion of the structural formula of the drug in relation to adrenalin and tyramin. He stated that he felt that the question of duration rather than the intensity of the effect of ephedrine constituted its chief advantage over adrenalin. Furthermore, it has an extremely low toxicity and may be given either intramuscularly, subcutaneously, intraperitoneally, intravenously or orally. The drug is very stable, and exposure to boiling, light and air has not changed its efficacy. It is not habit forming and its cheapness and its effectiveness on oral administration are considerations of primary importance. Insofar as the toxicity is concerned Dr. Chen estimated that it would be necessary to give upward of thirty (30) grams by mouth in the human to cause death, if the minimal lethal dose of the tested animals was correct.

This paper was discussed by Dr. A. S. Loevenhart and Dr. Wm. S. Middleton.

PREVENTIVE MEDICINE

Edited by

W. D. STOVALL, Chairman

Section on Preventive Medicine, State Medical Society of Wisconsin

HOW MILWAUKEE ABORTED ITS SMALL-POX EPIDEMIC

BY JOHN P. KOEHLER, M.D.,
Commissioner of Health

We are using the word aborted instead of prevented, because with a total of 386 smallpox cases and 87 smallpox deaths reported within the first seven months of this year, we can hardly say that a smallpox epidemic was prevented. When we study the smallpox epidemics in Milwaukee of 1871-'72-'73 with 535 deaths, 1876-'77 with 438 deaths, and 1894-'95 with 274 deaths, we cannot help but feel that an epidemic, if not entirely prevented during the year of 1925, was at least aborted or cut unusually short.

The Milwaukee smallpox epidemic this year was not only unusually short compared to previous epidemics in Milwaukee, but was also of short

duration compared to recent smallpox epidemics in other cities. Although the first virulent case of smallpox was reported Dec. 21, 1924, the number of smallpox cases reported thereafter did not exceed the normal expectancy until March, from which time there was a rapid increase, which reached its height during May, and dropped to normal in July. We, therefore, feel justified in stating that the epidemic lasted only four months, instead of a year or more, as smallpox epidemics usually do.

The first virulent case was that of a man who had visited a city with a great deal of smallpox, two weeks previously. While we know of several cases directly traceable to this first patient, yet we are convinced that this man was not the only source of Milwaukee's epidemic. We are certain that the epidemic among the colored people was brought in from the outside.

Although the Health Department did considerable vaccinating during the fall of 1924, and during January and February of 1925, with the hope that it could protect the city against smallpox infection from neighboring cities, it was evident by the first part of March, that an epidemic could not be prevented unless there was a rapid increase of vaccinations. Although every effort possible was made to isolate smallpox patients, yet we found that every new case had exposed many people before the diagnosis was made and the case reported to the Health Department, which convinced us that a 100% vaccination of the city's population was the only reliable means of preventing the loss of many lives from smallpox in Milwaukee.

We, therefore, warned the public through the newspapers on March 4th against the approaching of a smallpox epidemic and offered free vaccinations during the day and evening to all who wished to get vaccinated. No effort was made to close schools, theatres and other public meeting places, although strongly urged to do so by some anti-vaccinationists. We felt that only vaccination could be relied upon to check smallpox, and any other measures might only give people a false sense of security, and in that way do more harm than good.

When a smallpox epidemic is headed for a city, there are only two things to think of. These are: First. Delay exposure to smallpox as long as possible, so that all will have sufficient time to become successfully vaccinated. Second. Get everybody vaccinated in the shortest possible time. We

say "delay exposure" instead of "prevent" because we are certain that exposure cannot be prevented, but only delayed, and the quicker the public realizes this fact, the better.

In order to postpone the exposure of unvaccinated individuals as long as possible, we hospitalized all smallpox patients that would submit to hospitalization, established absolute quarantine if they remained at home, and quarantined all unvaccinated exposed persons for fourteen days, even though they submitted to vaccination.

On account of the virulency of the infection, we found that most of the exposed individuals, who had no scars from previous successful vaccinations, came down with smallpox, in spite of the fact that they were vaccinated immediately after exposure. In many cases the vaccination began to work about the time the patient came down with smallpox. We do not believe that the recent incipient vaccination modified the disease in many cases, because our records show that many such patients were overwhelmed by the smallpox infection, and died very shortly after the onset of the disease.

To vaccinate a city of a half million people, two conditions must exist: First, the people must be willing to be vaccinated; and, secondly, the Health Department and private physicians must be ready to vaccinate them as soon as they are willing.

Since people cannot be vaccinated against their will, the biggest job of a Health Department has always been, and always will be, to persuade the unprotected people to get vaccinated. This we attempted to do in three ways: First, by education; second, by fright; and third, by pressure.

We dislike very much to mention fright and pressure, yet they accomplish more than education, because they work faster than education, which is normally a slow process. Time is a life saver during smallpox epidemics, and all delays must be avoided. During the months of March and April we tried education, and vaccinated only 62,000. During May we made use of fright and pressure, and vaccinated 223,000 people.

Our educational program consisted of warnings in the daily papers, smallpox posters on the streets, in stores and factories, special smallpox bulletins for all large places of employment, and special letters to all large employers from the Health Department and the Association of Commerce, calling their attention to a threatening smallpox epidemic. The radio was also made use of in this work.

As the conditions grew worse, we felt justified in using stronger measures. We had some good pictures taken of patients suffering from the confluent type of smallpox, and had posters, showing these pictures, distributed all over the city. The moving picture theatres cooperated at this time by issuing warnings on the screen. The newspapers published daily the names and addresses of people dying from smallpox. A second letter was sent to all factories, stores, and other places of business, informing them of a rapidly approaching smallpox epidemic, and advising them to have their employes vaccinated immediately, and thereby prevent a serious financial loss to the city, which might occur if a real epidemic developed.

At this time the department was vaccinating thousands of people daily, but there were still too many who could neither be educated nor frightened into vaccination. Cases and deaths each amounted to a considerable number, and we now felt justified in using all of the power a health officer has, and if that was not enough, to get more. We sent out a third letter to all employers, requesting them to have all of their employes vaccinated, and at the same time informing them that if a smallpox case developed in their place of employment in the future, we would consider their place of business a menace to the health of the community, and very likely place the entire establishment under quarantine until it could be cleaned up and made safe for the public. Putting this responsibility on the employer, drove in thousands of anti-vaccinationists, who could better afford to get vaccinated than lose their jobs. All employers cooperated very bravely with this last request, although in a few instances it was necessary to lay off old, reliable and valuable employes.

Up to this time we urged the employers to have their employes vaccinated by private physicians, but in our last letter to them, we offered the larger establishments free vaccination service in their places of business. Up to this time our vaccination in schools had been mostly voluntary, with very good results, but we were still having an occasional case of smallpox among unvaccinated children. We, therefore, ruled that whenever there was a case of smallpox in a school district, regardless of whether it was a school child or not, compulsory vaccination was legal and justifiable, and in that way obtained almost a 100% vaccination of our school population.

We had two districts in Milwaukee in which a considerable number of cases of smallpox occurred. These districts, by authority given the Commissioner of Health, by special action of the State Board of Health, were quarantined and no one living therein was permitted to leave the house unless successfully vaccinated or submitting to vaccination. There were only three or four individuals who preferred quarantine to vaccination, and these all accepted vaccination after a few days' quarantine.

At our request, the Milwaukee City Service Commission decided not to certify any employes for appointment or promotion, who could not show a recent successful vaccination. This rule is still in effect now, and we hope that it will always remain so.

There were many other things done to make people accept vaccination, such as writing special letters to churches, clubs, fraternal organizations and schools, and by having a special vaccination party for the city officials and Common Council, but we must stop here and report on how we took care of the people after they were willing to get vaccinated.

We had three vaccination stations open from 8:00 A. M. to 9:00 P. M. These were located in the City Hall, and in the North and South Side Health Department Stations. We vaccinated as many as 5,000 a day in the City Hall station alone. Our thirteen child welfare stations were all used as vaccination stations for mothers and their younger children. All of the hospitals in the city had free vaccination periods every afternoon. The Wisconsin Anti-Tuberculosis Association, the Milwaukee Urban League, the City Library, and the Bay View Community House, all furnished the Health Department with stations and clerical help. Special stations were established in districts that were to be quarantined, so that the people might have an opportunity to get vaccinated before the entire district was placed under quarantine.

During the height of the vaccination campaign, there were vaccinated at the various stations over 15,000 people per day, without counting the revaccinations. Almost every available nurse and doctor in the city was required to carry out this large vaccination program. The Health Department vaccinated a total of 312,000 people, many of whom had to be revaccinated, bringing our total vaccinations over 500,000. The expense of these

vaccinations, and the extra expense of caring for smallpox patients at the hospital, amounted close to \$50,000.

About 111,000 vaccinations of private patients were reported by 450 physicians. This gives us a total of 423,000 people vaccinated during the epidemic. No doubt, there were thousands of vaccinations done by the two or three hundred physicians, who made no reports to the Health Department.

In concluding, we would like to state, briefly, some of the more interesting facts brought out by this epidemic.

1. Smallpox epidemics can only be prevented by compulsory vaccination laws. Most people will never submit to voluntary vaccination until an epidemic is present to frighten them into it.

2. Smallpox picks out the unvaccinated, regardless of whether they are clean or dirty, rich or poor.

3. Eleven members in one family, who had never had smallpox, had never been vaccinated, and who refused vaccination, all contracted smallpox, although every effort was made to protect them, by sending those members, who showed symptoms of smallpox, immediately to the Isolation Hospital.

4. The greatest number of deaths reported during any one week was 13, and the greatest number of cases was 137 per week. The greatest number of active cases at any one time was 140.

5. The Milwaukee Health Department furnished, without any charge, to physicians for private patients, 138,735 individual capillary tubes, and 2,845 vials, each containing sufficient vaccine for fifty vaccinations.

6. Private physicians, assisting the regular Health Department staff in the vaccinations, were paid over \$13,000.

7. There were 22 hemorrhagic cases, all of whom died—20 had never been vaccinated and two were vaccinated 28 and 65 years ago. Of the 93 confluent cases, 46 died. Of those that died, 39 were never vaccinated and seven were vaccinated from ten to fifty years ago.

Of 175 discrete cases, 19 died. Of those that died, 18 were never vaccinated, and one was vaccinated twenty-five years ago.

Of the 386 people who had smallpox, there were 327 who were never vaccinated, 53 who were vaccinated over 7 years ago, 4 over 5 years ago, and the vaccination history of 2 was unknown.

(Continued on page 333.)

THE STATE MEDICAL SOCIETY OF WISCONSIN ORGANIZED 1841

Officers 1925

WILSON CUNNINGHAM, Platteville, President HOWARD CURL, Sheboygan ROCK SLEYSER, Wauwatosa, Treasurer
J. GURNEY TAYLOR, Milwaukee, 1st Vice-President 3rd Vice-President Mr. J. G. CROWNHART, Executive Secretary
H. A. JEGI, Galesville, 2nd Vice-President 558 Jefferson St., Milwaukee

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4th Dist., W. Cunningham - Platteville 8th Dist., T. J. Redelings - - Marinette 12th Dist., Hoyt E. Dearholt - Milwaukee

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Committee on Medical Defense

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J. P. McMAHON, Milwaukee C. H. BUNTING, Madison EDWARD EVANS, LaCrosse W. E. GROUND, Superior
W. K. GRAY, Secretary, Wells Building, Milwaukee

Committee on Health and Public Instruction

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L. H. PRINCE, Sparta, Secretary

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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

ASHLAND-BAYFIELD-IRON

On Thursday evening, October 8th, the members of the Ashland-Bayfield-Iron County Medical Society were entertained at the annual banquet by President C. J. Smiles.

Following a dinner at the Elk's Club the members were addressed by Dr. N. H. Gillespie of Duluth, who spoke on "Sinusitis in Relation to Clinical Medicine." Our secretary, George Crownhart, was with us and gave us a most illuminating discussion concerning the work of the Legislative Committee at Madison. Dr. M. S. Hosmer of Ashland presented a paper on "Ultra-Violet Ray Therapy in Pyorrhea." Following the papers election of officers for the coming year was held. Dr. C. O. Hertzman of Ashland was elected president; Dr. Bernard Schlossman, Washburn, vice-president; Dr. R. L. Gilman, Ashland, reelected secretary, and Dr. R. O. Grigsby, Ashland, censor.—R. L. G.

BROWN-KEWAUNEE

The regular meeting of the Brown-Kewaunee County Medical Society was held Tuesday evening, October 6th, at the Beaumont Hotel, Green Bay. Dinner was served at six o'clock after which the meeting followed.

Dr. W. E. Fairfield, Green Bay, read a paper on "Standardization in Medical and Surgical Practice." Dr. E. S. Knox, Green Bay, delegate to the Annual Meeting, reported on his trip and there were also other reports on the "high spots" of the state meeting.

—F. M. H.

DANE

A symposium on tuberculosis was presented by Drs. A. M. Carr, L. R. Head, W. S. Middleton, E. M. Medlar and C. A. Hedblom, all of Madison, at the regular meeting of the Dane County Medical Society which was held at Morningside Sanatorium Tuesday evening, October 13th. Dinner was served at 6:30 and was followed by an inspection tour of the hospital. The papers presented carried tuberculosis through the first treatments to the most recent discoveries.—L. F.

KENOSHA

Hon. Walter D. Corrigan, Milwaukee attorney and authority on disputed points in American history, addressed the Kenosha County Medical Society, the Kenosha Dental Fraternity and some attorneys as their guests, at a banquet at St. Catherine's Hospital on Tuesday evening, October 6th. Attorney Corrigan gave his famous lecture, "The Defense of Aaron Burr," which was followed by a splendid banquet in the dining hall of the hospital. Dr. W. C. Stewart, president of the society, who was instrumental in securing the speaker, presided.—H. B.

MARINETTE-FLORENCE

The Marinette-Florence County Medical Society held a meeting on Tuesday evening, October 27th. Dr. Julius Bellin of Green Bay was the speaker of the evening, his subject being "Early Diagnosis and Treatment of Uni-

lateral Tuberculosis of the Kidney." The paper was well received and elicited a generous discussion. A bountifully appointed dinner was served and the round-table aftermath was most interesting. M. D. B.

MILWAUKEE

The members of the Milwaukee County Medical Society met at Hotel Pfister Friday evening, October 9th. Dr. C. W. Hopkins, Chicago, chief surgeon of the C. & N. W. R. R., spoke on "Multiple Fractures of the Pelvis Complicated by Dislocation of the Head of the Femur." In addition to the technical material of his paper the doctor discussed some of the interesting general problems which he had encountered. His paper was illustrated by lantern slides.

Dr. John Powers, Milwaukee, presented a paper, which was also illustrated, on "A Case of Central Fracture of the Acetabulum Complicated by Pregnancy."

—E. L. T.

OUTAGAMIE

Dr. Charles Elliot of the Northwestern University presented a paper on "Goiter" at the monthly meeting of the Outagamie County Medical Society on October 20th. A clinic was conducted at St. Elizabeth Hospital in the afternoon at which Dr. Elliot demonstrated and discussed certain goiter types. In the evening the doctors held a banquet in the Crystal room of the Conway Hotel, Appleton, which was followed by the address by Dr. Elliot, illustrated with lantern slides.

RACINE

The regular meeting of the Racine County Medical Society was held in the classroom at St. Mary's Hospital, October 22nd, at 3:30 p. m. Dr. Roland S. Cron of Milwaukee gave an address on the subject of "The Prevention and Relief of Prolapsus Uteri." The lecture was illustrated with stereoptican slides.—S. J.

ROCK

Members of the Rock County Medical Society met at Hotel Hilton, Beloit, on September 29th. Prof. John Callahan of Chicago gave the address of the evening.

NINTH COUNCILOR DISTRICT

The autumn meeting of the Ninth Councilor District Medical Society was held at Wausau on the afternoon and evening of September 30th. The members met at St. Mary's Hospital at 4:00 p. m., where a pediatric clinic was conducted by Dr. C. G. Grulec, Prof. of Pediatrics, Rush Medical College, Chicago. Dinner was served at the Elk's Club. The features of the evening program included a paper by Dr. C. G. Grulec on "Intra-cranial Hemorrhage in the Newborn;" a talk by Mr. D. C. Everest, Wausau, on "Economic Conditions in Mexico," with an exhibition of films illustrating Mexican scenes by Dr. M. L. Jones, Wausau.—J. F. S.

TENTH COUNCILOR DISTRICT

The Tenth Councilor District Medical Society held its 25th Annual Meeting at Eau Claire on October 1st. Close to one hundred physicians from the nine counties in the district attended the meeting. Luther Hospital

was the scene of a chest clinic and an abdominal clinic from 9 until 12 a. m. The medical side of the chest clinic was conducted by Dr. Willis S. Lemon of the Mayo Clinic, and the surgical side by Dr. Carl Arthur Hedblom, Prof. of Surgery, University of Wisconsin. Dr. Henry Ludwig Ulrich, Associate Professor of Medicine, University of Minnesota, had charge of the medical side of the abdominal clinic and the surgical side was handled by Dr. Arnold Schyzer, St. Paul, Minn.

The scientific program opened at 2:00 p. m. at the Public Library. Dr. Emil S. Geist, Associate Professor of Orthopedic Surgery, University of Minnesota, presented a paper on "Fractures of the Elbow." Dr. Herman L. Kretchmer, President of the American Urological Society, Chicago, spoke on "Pyelitis" and Dr. Samuel E. Sweitzer, Asst. Professor of Dermatology, University of Minnesota, on "Skin Diseases." Dr. H. Gideon Wells, Professor of Pathology, University of Illinois, Chicago, lectured on "The Present Status of Cancer Research."

A business session and election of officers followed the 6:30 dinner at Hotel Eau Claire. Dr. E. L. Mason, Eau Claire, was elected president and Dr. E. E. Tupper, Eau Claire, was elected secretary of the Society. Special entertainment and dancing marked the evening program.

—R. E. M.

GREEN BAY ACADEMY OF MEDICINE

The September meeting of the Green Bay Academy of Medicine was held at St. Vincent's Hospital the evening of Wednesday, September 9th. After a brief business meeting the following papers were read and discussed: Dr. E. G. Nadeau, "Interpretation of Headache;" Dr. J. J. Robb, "Headaches Due to Focal Infection," and Dr. William Comec, "Headaches of Nasal Origin."—E. G. N.

The October meeting of the Green Bay Academy was held at St. Mary's Hospital on October 14th. Dr. W. M. Wochos of Kewaunee read a paper on "Optimistic Medicine—Preventive Medicine." This paper was discussed by Dr. Stiennon, Green Bay, and Dr. Boyden, Brillion.—E. G. N.

MILWAUKEE ACADEMY OF MEDICINE

The Milwaukee Academy of Medicine held its first October meeting at the Health Service Building, Milwaukee, on Tuesday, the 13th. Dr. Henry J. Olsen presented a paper on "Is Caesarean Section Indicated in the Delivery of Breech Presentation?" and Dr. L. M. Warfield spoke on "The Value of a Simple Method of Orthodiagraphy."—D. W. R.

The Milwaukee Academy met again on October 27th. Dr. William J. Egan gave a paper on "Pneumonia" and a symposium on "Headache" was presented by Drs. Nelson M. Black, William E. Grove, A. I. Rosenberger and T. L. Szlapka.

MILWAUKEE NEURO-PSYCHIATRIC SOCIETY

The Milwaukee Neuro-Psychiatric Society have again resumed their regular meetings, the first of which was held at the Milwaukee Athletic Club on October 22nd. Dinner was served at 6:30, and each member had been

requested to invite a guest. Dr. Charles F. Read, Professor of Nervous and Mental Diseases, Loyola University, was the speaker of the evening, his subject being "Outlines of a Good State Hospital."—W. T. K.

CENTRAL WISCONSIN SOCIETY OF OPHTHALMOLOGY AND OTO-LARYNGOLOGY

The fall meeting of the Central Wisconsin Society was held at Appleton on September 22nd. The morning was devoted to playing golf followed by luncheon at the Country Club. At 2:30 the meeting was called to order at the Conway Hotel, where interesting talks were given by Dr. Harry Pollock of the North Chicago Hospital on "The Newer Intra-nasal Procedures," and by Mr. J. G. Crownhart, executive secretary, on legislative problems as they affect those practicing ophthalmology. After a full discussion of these topics the annual business meeting was held which resulted in the election of the following officers for the ensuing year: President, Dr. Will G. Merrill, Wisconsin Rapids; Vice-President, Dr. Irving V. Grannis, Menomonie; Secretary-Treasurer, Dr. Lyman A. Copps, Marshfield; Board of Censors, Dr. L. M. Willard, Wausau; Dr. E. H. Brooks, Appleton, and Dr. Fred S. Cook, Eau Claire.

At 6:30 a banquet was served to the members of the Society and also to members of the Outagamie County Medical Society. Dr. George F. Suker of Chicago presented the address of the evening on "The Manifestations of Syphilis in the Optic Nerve and Optic Pathology."

—W. G. M.

NEWS ITEMS AND PERSONALS

Three new additions to the medical school staff were among the appointments and changes made in the faculty and instructional staff of the University of Wisconsin recently by the executive committee of the board of regents.

Dr. William J. Focke was appointed instructor in medicine and Drs. Louis Fauerbach and Harry Kay were designated to assist in the course in physical diagnosis.

Five physicians have been added to the active staff of the Emergency Hospital, Milwaukee. Dr. J. P. Kochler, health commissioner, in announcing the appointments, said that each physician has agreed to answer calls on the instant and to serve free of charge.

Those added to the surgical staff are: Drs. Joseph J. Adamkiewicz, Alexander Montgomery and C. A. Fidler. Dr. A. J. Hood was appointed urologist and Dr. Samuel Higgins, otolaryngologist.

While on his way to make a professional call several weeks ago, Dr. A. F. Schmeling, Columbus, met with a peculiar accident. He hit a fly that was flying about in the coupe and in doing so turned the steering wheel, the car, running up an embankment and striking a tree. The doctor suffered a few cuts on his face and a broken rib but was very fortunate in not being more seriously injured. He was immediately brought to town by a passing truck. The car, a Haynes coupe, was very badly damaged.

Dr. L. N. Hicks, Burlington, dean of the medical profession in that city and a practicing physician for two score years, suffered a paralytic stroke. He was stricken suddenly when about to alight from his car. The latest reports are to the effect that he is rallying.

A morphine addict entered the office of Dr. M. A. Cunningham in the Jackman Building, Janesville, a short time ago and escaped with a quantity of hypodermic needles and narcotics. It is believed entrance to the office was obtained by means of a skeleton key.

Dr. Frederick A. Davis of the Davis, Neff and Bower clinic, arrived in Madison recently from Europe where he has been traveling for the past three months. Dr. Davis visited at Heidelberg, Germany, and spent several weeks in study at Vienna and London.

A check for \$2,500 has just been received by the Hartland community fund committee from Clarence Dillion, New York financier, who recently closed one of the biggest deals ever recorded in the New York financial world.

The gift was in appreciation of the work of a Hartland physician, who saved Mr. Dillion's life after the latter suffered a broken neck in an unusual accident in Hartland eighteen years ago.

A Milwaukee road express train was speeding through the village and hit a large dog which was wandering along the tracks. The dog was catapulted into the midst of a little group gathered on the depot platform and struck Mr. Dillion, who was visiting in the village, full force, breaking his neck.

The physician contrived an apparatus to rest the broken vertebrae.

Dr. F. A. Southwick, Stevens Point, is touring the New England states. He is accompanied by his daughter, Mrs. Burton Keeler. Dr. Southwick will probably leave for Florida later where he will spend the winter months, returning to Stevens Point in the spring.

Dr. A. C. Borchardt, New London, and his son, Dr. Melvin Borchardt, who has just completed his internship, have made arrangements for organizing a clinic. In connection with the clinic, the large building, recently purchased by Dr. A. C. Borchardt, will be converted into a private hospital with room for eight or nine patients.

Dr. Louis M. Warfield, who has been away from Milwaukee for three years, has returned to the city to resume the practice of internal medicine and diagnosis.

Dr. Warfield was for two years Professor of Medicine, and Head of the Department at the University of Michigan Medical School at Ann Arbor, Michigan, and recently spent nine months in Europe visiting the various medical clinics. He now resides at 193 Prospect Avenue, Milwaukee.

Several copies of the last Lay Issue of the Wisconsin Medical Journal were requested to be sent to Dr. G. H. F. van Gils, who is secretary-treasurer of the Holland Anti-Tuberculosis Association at The Hague and Dr. M. Vos, superintendent of the State Sanatorium at Hellendoorn, Holland. They are very much interested in what is being accomplished in this state in lay educational work.

Dr. J. V. R. Lyman, Eau Claire, who is suffering from a nervous breakdown is steadily improving. The doctor himself writes from Milwaukee that he is gaining in weight and is sleeping well. Dr. Lyman underwent a blood transfusion some time ago.

Milwaukee County has been unable to obtain a physician to succeed Dr. John P. Koehler as head of the county dispensary and substitution of a part-time man has been recommended. An examination of candidates for the position was held under auspices of the county civil service commission, the actual examining being done by a committee of doctors. The committee reported that none of those who had applied were qualified.

The board of trustees has now recommended that the position of dispensary chief be abolished. In its place the board would create the position of a part-time clinical director and who also would be subject to call. The trustees claim that this plan would attract high-grade men who would not accept the full-time job.

The October meeting in the course of post-graduate medical extension clinics and lectures was held at Ripon during the first week of the month, with physicians from Green Lake, Berlin, Princeton, Neshkoro, Red Granite, Fairwater, Poysippi, and Brandon attending.

Dr. A. G. Jenner, Milwaukee, who was in charge, conducted a clinic in the office of Dr. C. U. Senn, Ripon, on thelitis, nephritis, pyelonephritis and nephrosis systems.

The medical practice of Dr. Anna Brown Corr, Juneau, established in that city twenty-three years ago, descended to younger hands recently when her son, Dr. Philip Corr, and his wife, also a doctor, formally took over the office and clientele.

Dr. Anna B. Corr for several years, in addition to her regular practice, conducted a hospital at her residence which is understood will be continued by her successors. Dr. Philip Corr has also arranged to take over temporarily the practice of Dr. P. H. Doughty and is now in charge of the latter's office. Dr. Doughty has been in poor health of late and has decided to rest for possibly six months.

Dr. Edward L. Miloslavich, Professor of Pathology at Marquette University, Milwaukee, addressed the Marathon County Medical meeting at Wausau on "Pathology of Human Tuberculosis."

The doctor also spoke before the La Crosse County Medical Society on "Importance of Post Mortems for the Practitioner."

Dr. Walter J. Meek, Assistant Dean of the Medical School at the University, spoke on "The Human Machine" at the meeting of the Round Table held October 15th at Hotel Retlaw, Fond du Lac.

Under the leadership of Dr. Ralph W. Webster, Chicago, a nation-wide committee of doctors has been organized to raise a fund of \$250,000 as a contribution from Rush Medical College alumni toward the general development funds of the University of Chicago.

This sum of \$250,000 to be given by Rush doctors will be part of the \$2,000,000 which alumni of the University are raising and which is to go toward the com-

prehensive program of construction and endowment covering the immediate needs of the institution. Dr. Post said yesterday that Rush men already have pledged \$155,000 toward their quota, and thus the sum of \$95,000 remains to be pledged. Of this \$95,000, Rush alumni in Chicago will raise \$70,000. The balance of \$25,000 will be raised by doctors outside the city.

Organized with the idea of establishing a friendly feeling among fellow physicians, the Milwaukee Physicians' Association will hold meetings monthly, with some prominent Milwaukee physician as speaker at each meeting. Dr. B. A. Hoermann was elected president of the association, Dr. A. Krygier, vice-president and Dr. G. F. Mueller, secretary and treasurer.

Dr. A. M. Pederson, who has practiced medicine in Waupaca for the last two years will establish his residence in the state of Nebraska. The doctor was formerly at Scandinavia before coming to Waupaca.

Dr. P. B. Amunson, Mondovi, has taken Dr. O. V. Linhardt into partnership, who comes to the city from Baltimore, Md. The doctor is a graduate of the University of Maryland in 1915 and later completed a course in surgery and obstetrics at the University of Washington, Seattle.

Dr. G. J. Juckem, who has been practicing at Howards Grove and vicinity for the past five years, and wife left for Europe from New York on October 24th. They plan to spend six months abroad, where the doctor will specialize in his work at the Wertheimer clinic in the Franz Joseph's hospital at Vienna.

Dr. and Mrs. Wilson Cunningham announce the marriage of their daughter, Miss Mary Cunningham, to Mr. William Dempster Hoard, Jr., of Fort Atkinson on Saturday, October 24th. Mr. and Mrs. Hoard, Jr., will be at home at 400 Foster Street, Fort Atkinson, after the first of December.

Dr. M. G. Peterman, Associate in Pediatrics, Mayo Clinic, has accepted the position of Director of Laboratories and Research at the Children's Hospital, Milwaukee. Dr. Peterman will also have a private consultation practice in that city.

Dr. Edwin P. Bickler, formerly of St. Mary's Hospital, Milwaukee, is at present pursuing a course in Internal Medicine at the University of Pennsylvania and expects to be in Philadelphia at least until next summer.

DEATHS

Dr. Frederick W. Kappelman, Milwaukee, died at his home on September 25th following a short illness. He was born in 1875 and graduated from the Northwestern University Medical School, Chicago, in 1912. Dr. Kappelman was a member of the staffs of the Deaconess and Emergency Hospitals, of the Milwaukee County Medical Society, the Milwaukee Academy of Medicine, the State Medical Society of Wisconsin and the American Medical Association.

Dr. Kappelman is survived by his wife, Elsie Gillette Kappelman, his father, H. H. Kappelman, a brother and three sisters.

Dr. George A. Keland, Madison, died Tuesday evening, September 22nd, at his home. Dr. Keland was born in Flagstad, Norway, June 12, 1882, and graduated from the Wisconsin College of Physicians and Surgeons, Milwaukee, in 1912. Surviving him are one son, Arnold, of Madison, three sisters and three brothers.

Dr. Patrick H. McGovern, Milwaukee, died at Columbia Hospital on September 30th after a long illness. The doctor had been confined to his room in the hospital for five months. He was born at Elkhart April 24, 1864, and graduated from the University of Pennsylvania School of Medicine in 1894. In 1896 he married Miss Abbie Rothmann of Fond du Lac who survives him. Dr. McGovern began his practice in Cedarburg with his brother, the late Dr. William P. McGovern. He is also a brother of former Governor Francis E. McGovern and Dr. J. J. McGovern of Milwaukee.

Dr. McGovern was a member of the Milwaukee County Medical Society, the State Medical Society of Wisconsin and the American Medical Association. He served as president of the Milwaukee County Society from 1921 to 1922.

SOCIETY RECORDS

NEW MEMBERS

Markson, M. R., 1028 Walnut St., Milwaukee.
Hall, Earle H., 608 Minahan Bldg., Green Bay.
Fencil, Y. J., Casco.
Schneller, E. J., Racine.
Smith, H. F., 209 6th St., Racine.

CHANGES IN ADDRESS

Ostrander, A. J., Chetek, to Enderlin, N. D.
Hudson, R. J., St. Mary's Hospital, Madison, to Prairie du Sac.
Bickler, Edwin P., St. Mary's Hospital, Milwaukee, to 532 So. 49th St., Philadelphia, Pa.

EXAMINERS MEET

The mid-year meeting of the State Board of Medical Examiners will be held at Hotel Loraine, Madison, on January 12th, 13th and 14th, 1926. This will be preceded by a meeting of the Basic Science Board at Milwaukee on December 18th and 19th.

Dr. Robert E. Flynn, State Bank Building, La Crosse, is secretary of the State Board of Medical Examiners and Prof. M. F. Guyer, Department of Zoology, Madison, is secretary of the Basic Science Board. A certificate from the Basic Science is a prerequisite to taking the examination before the State Board of Medical examiners.



The New Albert Merritt Billings Hospital Under Construction at Rush.

CORRESPONDENCE THE ANNUAL MEETING

Milwaukee, Wis., Oct. 13, 1925.

Editors of Wisconsin Medical Journal.

Dear Doctors:

Inclosed little article contains a few after-thoughts regarding the program of our last state meeting. You may use it in the Journal, if you wish, in any form you prefer.

Praternally yours,

I. FRANKLIN, M.D.

The presentation of papers dealing with physiological and biological considerations as the *keynote* of a medical program, is an innovation deserving our fullest appreciation. It may seem strange, but it requires vision to emphasize the study of physiology as the basis for the understanding of diseased conditions and their management. And it surely takes courage to "put it over"—a gathering of practical minded medical men.

With the weight of traditional opinion on one hand, and the confusion of passing fads and theories on the other hand, we are constantly in need of being reminded, that whatever chance for recovery from disease there is, lies in the cellular vitality and structural integrity of the individual. That without these inherent conditions of the organism, no sort of medication, manipulation, or operation will do the patient any good.

The modern medical man may believe himself superior to the ancient medicine-man, because he carries a blood pressure apparatus in his pocket, instead of wearing a bear's foot around his neck; administers elegant pharmaceuticals instead of nauseating concoctions; and relies on the knife instead of incantations. But with all that, if he fails to understand disease as a biological reaction of inherent forces of the organism; if he regards disease as a sort of detached, external condition forced into, or grafted upon the individual,—and with that in mind treats his patient,—then his state of mind is essentially that of the primitive medicine-man, who is beating his Tom-tom to drive the evil spirit out of the afflicted.

The era of pills and potions in medicine is about to pass, but the end of meddling practices in general is not yet in sight. Less faith in our "healing" proresses, and more faith in nature's powers will lead us to a closer

study of physiology and biology, and thus enable us to aid instead of hinder the self-restoring vital processes in the sick and the injured.

FROM THE PRESIDENT

October 1, 1925.

My dear Mr. Crownhart:

This is a tardy but appreciative acknowledgment of the resolution of the State Medical Society of Wisconsin which you were kind enough to send to me by telegram September 16. I can not tell you how much the confidence and promised cooperation of the doctors of the State mean to me.

With all good regards,

Very sincerely yours,

GLENN FRANK,

President.

Mr. J. G. Crownhart,
Milwaukee, Wisconsin.

BASIC SCIENCE EXAMINATIONS

Department of Zoology, Univ. of Wisconsin
Madison, Wis.

October 26, 1925.

Wisconsin Medical Journal,
Milwaukee, Wis.

Gentlemen:

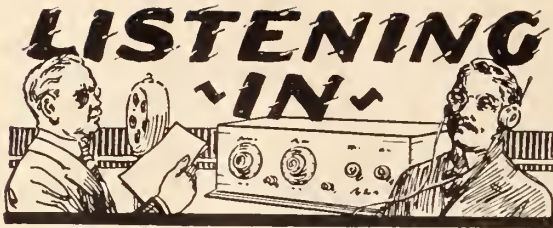
According to the new "basic science law," in effect in Wisconsin, since June 12, 1925, "no person shall treat, or attempt to treat, the sick unless he shall have a certificate of registration in the basic sciences" * * *. This certificate is obtained by passing examinations in human anatomy, physiology, pathology and diagnosis, or by "reciprocity," if the candidate "presents sufficient and satisfactory evidence of having passed examinations in the basic sciences before a legal examining board or officer of another state, or of a foreign country, if the standards are as high as those of this state * * *."

Examinations are held four times a year (March, June, September, December). The next examinations will be held in Milwaukee, December 18th and 19th at the Hotel Pfister. The March examinations will be held in Madison on March 13th and 14th, and the June examinations, in Milwaukee on June 12th and 13th.

Very truly yours,

(Signed) M. F. GUYER,

Secretary, Basic Science Board.



Save This

The members are advised that the coming December issue of the Journal is to be so edited as will make it valuable as a reference book throughout 1926. In addition to the proceedings of the House of Delegates and of the Council, the December issue will contain the membership list of the society and brief summaries of laws and rulings that pertain particularly to physicians both in practice and in private life. These summaries will include state laws and rulings as enforced by the State Board of Health, a complete statement on the new single permit law under the State Prohibition Enforcement Act, statements on both the federal and state income tax laws, and like matter. The secretary suggests that the members put the December issue of the Journal in their bookshelf where it will be available for reference at any time.

Lay Issue

The January number of the Journal will be devoted to the Third Annual Lay Issue. Upward of 10,000 copies will be distributed to the non-medical public throughout the state.

A Helpful Meeting

Secretaries of all state societies will meet at the American Medical Association Building, Chicago, November 20th and 21st, for their annual conference. These conferences are devoted to discussions on problems affecting societies' administration and the future welfare of the profession. Wisconsin will be represented at the conference by its secretary, president, president-elect, and treasurer.

Others Are Interested

Wisconsin was the third state to adopt a full time lay secretary-managing editor. As a result the society receives many communications from other state societies who desire to learn of the possibilities in this work. The most recent communication was one during the past month from the Colorado State Medical Society.

Our Basic Science Law

Exceeding in number the communications relating to the work of a full time officer, are communications asking for complete information on the Wisconsin Basic Science Law. Wisconsin is a pioneer in this law and copies have now been mailed in response to requests from many other states. The most recent request was from a former member of our state committee on Public Policy and Legislation, Dr. George C. Ruhland. Dr. Ruhland is now with the Department of Health of Syracuse, N. Y., and declares that "good will come from the passage of this bill."

Medical Defense

A delegate to the Minnesota House of Delegates recently obtained full information on the Wisconsin system of medical defense. By reason of excessive cost, Minnesota was forced to give up its state society defense two years ago.

It was pointed out that between 60% and 70% of the members of this society remit the additional \$2.00 annually to take advantage of the optional medical defense system.

A Better Journal

Effective with the February issue, our Journal will be enlarged and somewhat rearranged. Additional space will be given for the original article section and the editorial board plans to give major consideration to original articles submitted from the Wisconsin membership.

Standards Maintained

Two months ago we stated in this column that suggestions and criticisms were very helpful in the administrative work of the Journal and the society. Recently three Milwaukee members called the attention of the secretary

to the fact that an advertiser in the Journal was doing lay advertising of a typical "cure all" nature. The complaint was investigated, found to be correct, and the advertiser was promptly notified that the Journal was cancelling his contract. Maintaining a high standard of advertising is not conducive to financial return, but the membership thus is assured that advertisements appearing in their Journal are only those of firms of recognized standing and integrity.

IMPORTANT OPINIONS

That chiropractors may not enter a quarantined home for the purpose of treating the confined patient or any other member of the family without a special written permit from the health officer, was the opinion of the Attorney General given to the State Board of Health last month. In a second opinion on October first the Attorney General held that it was not permissible for chiropractors to append to their names the letters "D. C." meaning "Doctor of Chiropractic." The two opinions follow:

September 26, 1925.

State Board of Health,
Madison, Wis.
Gentlemen:

You ask to be advised whether under the existing laws, a chiropractor is permitted to enter a quarantined home for the purpose of treating a patient who is sick with a dangerous quarantinable disease or for the purpose of treating other members of the family without a special written permit from the Health Officer as provided for by section 143.05. Said section 143.05 in sub. sec. (3) contains the following:

"A placard shall be posted in a conspicuous position on the place, giving the name of the disease or the words 'quarantine' in letters not less than two inches high, and contain the following: 'All persons, except the health officer or his representative, attending physicians and nurses and clergymen, are forbidden to enter or leave these premises without a special written permit from the health officer, and all persons are forbidden to remove, obscure or mutilate this card or to interfere in any way with this quarantine without written orders from said health officer, under penalty of fine or imprisonment.'"

The question confronting us at the threshold is whether a chiropractor is a physician within contemplation of this statute. Section 4971 in sub. sec (4) lays down the rule in the construction of the statutes of this state which shall be observed unless such construction would be inconsistent with the manifest intent of the Legislature. It provides:

"The words 'physician,' 'surgeon,' or 'osteopath' mean a person holding a license or certificate of registration from the State Board of Medical Examiners."

A chiropractor is not licensed by nor does he receive a certificate of registration from the State Board of Medical Examiners. He receives a license to practice chiropractic from the Board of Examiners in Chiropractic under sec. 147.23. A chiropractor must also have a certificate of registration granted by the State Board

of Examiners in the basic sciences. But this does not qualify him as a physician, and in order to be a physician within contemplation of the Statutes of Wisconsin he must have a license or certificate of registration from the State Board of Medical Examiners.

You are therefore advised that a chiropractor is not a physician in contemplation of our statute and your question must be answered in the negative.

Very truly yours,

JEM:W J. E. Messerschmidt,
Assistant Attorney General.

Approved: C. A. Erikson, Deputy Attorney General.

CAPTION: A chiropractor is not a physician within the contemplation of the Wisconsin Statutes and is not permitted to enter a quarantined house without permission of the Health Officer. October 1, 1925.

Hon. A. L. Devos, District Attorney,
Neillsville, Wis.

Dear Sir:

You inquire whether it is permissible for chiropractors to append to their names the letters "D. C." meaning "Doctor of Chiropractic."

Your question is answered in the negative. Sub sec. (3) of Sec. 147.02, as amended by Chapter 408 of the Laws of 1925, provides:

"No person not possessing a license to practice medicine and surgery, * * * osteopathy, or osteopathy and surgery, under Section 147.05, shall use or assume the title 'doctor' or append to his name the words or letters 'doctor,' 'Dr.,' 'specialist,' 'M. D.,' 'D. O.,' or any other title, letters or designation which represents or may tend to represent him as * * * a doctor in any branch of treating the sick."

The above subsection clearly prohibits the use of the letters "D. C.," as these letters tend to represent and, in fact, do represent a chiropractor as a doctor in a branch of treating the sick.

Very truly yours,

CAE:W C. A. Erikson,
Deputy Attorney General.

Approved: Herman L. Ekern, Attorney General.

CAPTION: A chiropractor is not permitted to append to his name the letters "D. C.," which mean doctor of chiropractic.

MILWAUKEE'S SMALLPOX EPIDEMIC

(Continued from page 325.)

8. Three babies were born from smallpox mothers, all of whom contracted smallpox and died,

in spite of isolation and vaccination. They were 11, 12 and 14 days old at the time of death.

9. The cases were distributed by age groups as follows: 5 years and under—91; 6 to 10 years—42; 11 to 15 years—28; 16 to 20 years—24; 21 to 30 years—87; 31 to 50 years—82; 51 to 60 years—17; 61 to 75 years—14.

10. Three undertakers contracted smallpox from the handling of dead bodies. An order was issued by the Health Department against the embalming of smallpox bodies.

11. Steel and foundry workers furnished 48 cases, very likely because such employes usually have a great deal of confidence in their physical strength and, therefore, considered vaccination unnecessary.

12. Many persons who had smallpox years ago, had very good vaccination takes. The only complications or accidents of vaccinations reported were a case of tetanus from a secondary infection in a girl of six years, who made a complete recovery, and a generalized impetigo contagiosa in an undernourished infant of 9 months, which died. We know that occasionally skin eruptions develop following vaccination, but no one knows positively that the vaccination caused the severe impetigo in this infant.

If the Milwaukee Health Department was at all successful in its fight against smallpox, it was because it had the cooperation of the entire city. Even organizations that oppose vaccinations under normal conditions, made no effort to interfere with the work of the Health Department.

The almost universal cooperation, no doubt, was obtained through the holding of many conferences with representatives of various interests. Our hope now is that through education and health laws, we will be able to keep our city vaccinated for all time to come, and in that way save a great deal of work and worry, much money, and many lives.

Council on Physical Therapy Organized by the American Medical Association

The Council on Physical Therapy, proposed by Dr. Joseph F. Smith, Wausau, at the Atlantic City session of the American Medical Association, held its first meeting in Chicago on October 16th. The field of endeavor for the new council and a record of its first meeting are quoted from the Journal

of the American Medical Association of October 24th.

"The report of the organization and first meeting of the new Council on Physical Therapy of the American Medical Association, which appears elsewhere in this issue, places on record one of the most significant steps taken by the Association in its attempts to advance

modern therapy. For many years, pioneers have been working empirically with various electrical and mechanical devices; indeed, some have recognized the suggestive power of such methods and in many instances exploited them unduly to credulous physicians and to the more credulous public. It has become apparent that physical methods have a definite field both in the diagnosis and in the treatment of disease, and that it was incumbent upon some unbiased and scientific body to define the exact merits of these devices. This sentiment was crystallized in the resolution introduced into the House of Delegates at the last annual session of the Association, in Atlantic City, by Dr. Joseph F. Smith of Wisconsin. That resolution reads:

"WHEREAS, From time to time there are offered for sale to members of the medical profession and to hospitals many nonmedicinal agents of alleged therapeutic value consisting of electrical devices, mechanical contrivances, colored lights, various kinds of lamps, etc., the exact nature and action of which the individual members of the profession at large, because of the lack of the necessary technical skill, adequate facilities and instruments of precision, are not in a position to evaluate correctly, and

"WHEREAS, The purchase of such pieces of apparatus, often on the misrepresentation of persons offering them for sale, results in great financial loss to the members of the profession annually, and

"WHEREAS, The use of such devices and apparatus without adequate understanding and control on the part of the physicians employing them tends to deteriorate the physicians' alertness in making a diagnosis, thereby resulting in loss of time and money to patients; therefore, be it

"RESOLVED, That the trustees of the American Medical Association be empowered to appoint a Council on Non-medical Agents similar to the Council on Pharmacy and Chemistry consisting of at least two physicists, two physiologists, two pathologists and two clinicians whose duty it shall be scientifically to investigate and report on the value and merits of all nonmedicinal apparatus and contrivances offered for sale to physicians and hospitals and to publish in *The Journal of the American Medical Association* from time to time the results of its investigations.

"In due course the resolution was approved by the Reference Committee and by the House of Delegates and referred to the Board of Trustees, with a request for action. At its last meeting, the Board of Trustees nominated the members whose names appear under the heading of Association News.

"The Council, as will be observed, includes representatives of fundamental sciences closely allied to medicine, whose services are necessary in order to evaluate properly the worthiness of physical apparatus. The physicists, the physiologists and the pathologists will cooperate with representative clinicians who have made basic investigations in the field of physical therapy to determine whether or not heat produced by electricity, by external application or by light, or, indeed, by the use of drug irritants, is a desirable procedure in any given instance. They will endeavor to assign proportionate merit to each of these methods under various circumstances. Manufacturers of apparatus have been urged to submit to the Council's opinion the thousands of devices now available, and to submit also the advertising material, with a view to offering to physicians only such apparatus as may be sold with due regard for established fact. The whole-hearted cooperation with which many of the larger manufacturers have entered into the scheme is in itself

a tribute to the high position earned by the Council on Pharmacy and Chemistry of the American Medical Association, established more than twenty years ago. It is also a recognition of the value attaching to acceptance of advertising claims by that council, by *THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION* and by the journals of the various state medical associations which have adopted the approval of the Council on Pharmacy and Chemistry as their standard.

"The initial discussions of the new council indicate a desire to be of the widest possible service to scientific medicine. The plans include not only investigation and approval of physical apparatus, but inquiry into such methods as massage and manipulation, hydrotherapy and exercise. If the views now held are carried to fruition, physicians will have available shortly, through the work of this council, a statement of the present status of each of the physical therapeutic methods now known, including its history, its underlying physiology, its actions and its uses. Fellows of the American Medical Association will, it is hoped, appreciate the manner in which members of this council have taken hold of the tremendous problem, and at the same time recognize the fact that their work is given to the organization without idea of any compensation other than the regard of fellow scientists."

REPORT OF ORGANIZATION MEETING

"The Council on Physical Therapy held its first meeting, for organization purposes, at the headquarters of the American Medical Association on Friday, October 16. The Council is composed of two physicists, four clinicians, two physiologists and two pathologists.

"There were in attendance at the meeting: Dr. W. T. Bovie, assistant professor of biophysics, Harvard University, Boston; Dr. Arthur Compton, professor of physics, University of Chicago; Dr. Ralph Pemberton, internist, Philadelphia; Dr. Harry E. Mock, assistant professor of surgery, Northwestern University Medical School, Chicago; Dr. Arthur U. Desjardins, department of radium and roentgen-ray therapy, Mayo Clinic, Rochester, Minn.; Dr. George Miller MacKee, associate professor of dermatology and syphilology, Columbia University College of Physicians and Surgeons, New York; Dr. W. B. Cannon, professor of physiology, Harvard Medical School, Boston; Dr. A. S. Warthin, professor of pathology, University of Michigan, and Dr. Francis Carter Wood, Pathologist, director of the Institute of Medical Research, Columbia University, New York; also the ex-officio members: Dr. Olin West, Secretary and General Manager of the Association, and Dr. Morris Fishbein, Editor.

"The major portion of the discussion was devoted to the scope of the work of the Council and methods of procedure. Three committees were appointed: (1) committee on organization; (2) committee on education; (3) committee on field, scope, nomenclature and present status of physical therapy. The last mentioned committee will have charge of the preparation of a series of fundamental reports on therapeutic methods and on the apparatus used for carrying out such methods. These three committees are to formulate reports for presentation at an early meeting of the Board of Trustees."

The State Board of Health and Its Policies*

BY OTHO A. FIEDLER, M.D., PRESIDENT

Sheboygan

FIFTY YEARS

"Just fifty years ago a committee representing this Society reported to the annual meeting in 1875 that the Wisconsin legislature had adopted the proposal of the medical profession that there be established a State Board of Health. It is fitting that we commemorate that anniversary by calling on the present President of the Board to speak to us on the work of the board and his recommendations, so that the cordial feeling between the members of the board and their work and the members of this Society may ever increase."

President Wilson Cunningham.

To discuss the relations of the State Board of Health and medical activities generally and the practitioner presents several viewpoints, the viewpoint of the health officer, the viewpoint of the physician, and perhaps we should take cognizance of the viewpoint of the citizen who pays the bills. I don't know in just what capacity I am going to speak to you. This having a triple personality may have dire consequences.

I think you are all familiar with the incident that Oliver Wendell Holmes relates in the *Autocrat*, in which he was discoursing on the difficulty of reaching definite conclusions when two people were in conversation. He said, "The reason is that there are always six personalities in the conversation. If John and James are talking, there is John's John and James' John and God's John, or John as he really is; likewise there are the three personalities of James."

The man sitting next to Holmes was just passing the fruit and there were just three peaches left on the plate and he said, "One apiece for me," and he took them all, leaving none for the *Autocrat*. So if I get through this talk without peaches, it will be because I have been advocating the triple point of view.

I think every one is agreed that public health activity is most essential to the state. Disraeli long ago pointed out that the happiness and prosperity of the people depended on the public health, and that consequently the first duty of the statesman was the consideration of the public health. With this idea in mind, statesmen from time to

time have advocated various measures for a decreasing morbidity or illness and for increasing longevity in the people under their government.

I presume you are all familiar with the work which President Roosevelt did in conservation, primarily in conservation of the natural resources. But he pointed out that that was only part of a very much larger program of the conservation of the total resources of the nation which includes also the vital resources, and to this end he appointed a committee of one hundred, Irving Fisher of Yale as chairman, which submitted some years afterward and after exhaustive study, a report on the conservation of the vital resources of the United States. That study revealed this astounding fact, that there was a needless expenditure because of illness and premature death in the United States of \$3,000,000,000 annually, and that if what was known to medical science could be put into practice, if the public knew what medical men could do for them, and availed themselves of this service, we could wipe out within a period of ten years this tremendous waste.

Now it is evident from the report of the committee of one hundred that the real reason that we do not eliminate this waste is because the public is not properly informed as to what medical men can do and do not avail themselves of that service.

THE OBJECTIVE

The object of the State Board of Health is more or less to eliminate within the commonwealth of the state of Wisconsin this waste of time and money and humankind that is annually taking place. What are the means by which the State Board of Health hopes to accomplish this end? First, of course, upon that program necessarily comes education, the education of the layman, to bring to the knowledge of the layman the facts of medical science to such a degree that they will appreciate the necessity of employing the practitioner, the medical man, the scientist in time of illness, and, we hope, employ him at such a period as will prevent the occurrence of those pathological changes which we find in the chronic diseases by curing them while they are only functional disturbances.

The State Board of Health carries on this edu-

*Read before the 79th Annual Meeting, State Medical Society of Wisconsin, Milwaukee, September 16, 1925.

cational campaign by various means; first, by means of the press in which we carry articles, calling the attention of the laity to the discoveries in medicine and to the work that has been done in practice by magazine articles, on the newer discoveries and methods, and especially by means of bulletins. We use the printed page to bring to the people of the state a knowledge of the service that the physician can render, and because that doesn't always get across, we have to use sometimes in some fields ocular demonstration by means of the clinic.

In the second place, aside from this campaign of education, the State Board of Health, of course, is interested in the control of contagious diseases. I am not sure just how much has been accomplished in the control of contagious diseases by many of the rules and by many of the methods that have been employed in public health. I don't know how much influence we have had on, for instance, the spread of measles or of whooping cough or up to the present time scarlet fever. We have accomplished much in the case of typhoid fever and diphtheria and, I hope now, of scarlet fever and surely smallpox, but this has been done largely through scientific research and a method of immunization that has made the individual free from infection or made him immune to the infection. Whether we must proceed farther and carry our research to the point where we know the causative agent and then produce immunity through injections of either sera or vaccines, I am not sure, but scarlet fever still is more or less rampant, as are also whooping cough and measles. At any rate, the educational campaign that has been carried on along the lines of these diseases has been productive of much and we have eliminated practically from our state typhoid fever, and if we are awake and watchful we ought not have epidemics of smallpox. It is within our power now to prevent any great spread of diphtheria and probably scarlet fever.

PREVENTIVE EFFORTS

In addition to this work in contagious diseases, the Board has laid down certain rules and regulations which attempt to prevent the spread of the contagion. It has other activities. As you know, the State Board of Health in the Sanitary Engineering Department has control of all the public water supply of the state, and in its campaign in this field of endeavor has reduced the

incidents of typhoid fever deaths to practically nil. It has control of sewage disposal and disposition of industrial waters, and has in this capacity saved the water supply for both man and beast, and has abated many nuisances incident to industry. It has established a plumbing code under which no plumbing can be installed unless it is efficient and sanitary. All plans must first be submitted to the board or to its agents. These activities of the State Board of Health, I think meet with the hearty approval not only of the laity, but of the medical profession. In addition to that, the war brought certain new responsibilities and duties to the State Board of Health. The draft disclosed that hundreds of thousands of young men between the ages of eighteen and thirty-one, or in the draft period, were unfit for military service because of the fact that they had contracted venereal disease. When these facts were brought home to the officers and officials of the federal government, they took steps to curb this ravage of our young men and made certain appropriations for the work to be carried on in the states under certain conditions. The State Board of Health of Wisconsin had an appropriation made to it for the purpose of instituting measures for the control of venereal diseases. Out of this grew the reporting of venereal diseases, so that we hope by this method to keep the patient afflicted under control until a cure has been effected. Secondly, we had the institution of the venereal clinic.

The venereal clinic under the State Board of Health is a clinic to which any individual in the state may come for diagnosis, but not for treatment, unless he is an indigent and unable to afford the treatment. Moreover, the State Board of Health is willing to provide salvarsan for those who are able to pay for treatment but cannot pay for the salvarsan or neosalvarsan—neocarsphenamin.

The clinics as they are operating in this state, and there are several of them, are almost entirely clinics devoted to the indigent and to the individual whom the doctor is glad not to have in his office. If any other individual citizen comes to the venereal disease clinic, his case is reported not by number now, but by name, to the department, and they don't like the publicity. Consequently, we have not very many patients who are able to pay in our venereal disease clinic. I don't know how far we are getting with this work. I think on

the whole, perhaps, that the incidence of venereal disease is diminishing. I don't know what part the free venereal clinic has had in this. I am not sure but what prophylaxis from a scientific viewpoint would be better than cure, but there enters into the problem the moral side of the question and the possibilities of making individuals more lax in their morals, consequently, this is a rather dangerous thing to try.

In the campaign against venereal diseases and contagious diseases, the state helps the practicing physician further. It furnishes him with the sera, with certain vaccines, with certain medicaments; to prevent ophthalmia, it furnishes him with silver nitrate; it furnishes him with whooping cough vaccines; it furnishes him with typhoid fever vaccines, and if the physician has indigent patients or patients too poor to pay, it furnishes antitoxin. In that way the state assists in the control of contagious diseases and, further, it assists the practitioner by placing at his disposal a laboratory service for the diagnosis of a number of these diseases. All of this work of the state department, I believe, has the very hearty support of the medical profession.

As an outgrowth of the draft in which we found that from thirty-three to eighty-eight per cent of all our young men were unfit for military duty, many of them unfit by virtue of the fact that they had had in early infancy or in youth or in young adult life some condition that now made them unfit for service, the federal government again took action and passed the Shepard-Towner Act, under which there should be conducted in the cities of those states which availed themselves of the opportunity, the child welfare clinic. The state is conducting in a number of cities a child welfare clinic. The State Board of Health has done much in this parent and infant work. The function of this clinic is solely for the purpose of keeping or maintaining health in children and giving the mother prenatal advice so that she can give birth to healthy offspring. There is no treatment in the work which the child welfare clinic is doing, it is only in a measure diagnostic but largely educational.

DANGERS IN THE WORK

I think that on the whole the dangers of public health work lie largely in the clinic. Merrill Chapman, who is director of the Department of Hygiene

of the Massachusetts Department of Health, had this to say recently with regard to the clinic: "If the clinic is to live up to the standard we have already laid down, it will be conducted under the Board of Health and will be free to every citizen. If it offers services which cannot be properly given free to the well to do, as well as to the poor, it is probably carrying on activity which more properly belongs to the overseers of the poor. A rose called by some other name is said to smell as sweet, and charity disguised and served up under the auspices of the Board of Health is none the less a charity. The danger of a subtle form of pauperization of the community is probably greater through the mis-directed activities of clinics than through any other kind of municipal activity. The baby clinic should be for the well baby only. The dental clinic should be for prophylaxis and not for treatment. The nutrition class should teach the children good food habits, not feed them at reduced rates. The nose and throat clinic belongs to the hospital out-patient, and not in the office of the Board of Health. Especially is this true of the state, for in carrying on special clinics, the state division of child hygiene is on dangerous ground. There is a place for demonstration clinics in towns which are about ready to start work of their own, but which would like to have an ocular demonstration of how it should be done. It seems to the writer most unwise for the state to do more than to demonstrate and to help by advice. From the point of view of expediency, as well as from the point of view of opportunity, it is not wise to go farther."

That, I think, is the attitude of the State Board of Health in the matter of clinics, that we give ocular demonstrations, that we have no idea of holding a clinic for sick babies or for sick mothers, but that we have an educational campaign in which we teach mothers and children or guardians how to take care of the children and in which we advise them to seek their family physician.

It is the expressed purpose of the Board of Health to have no treatment given by any one who is in charge of a child welfare clinic. More than that. Child welfare nurses are all examined before they take up their work, and they are examined particularly as to their relation to the practicing physician. For example, they are asked what they would do in the event of a child coming to you with tonsils, for instance, that were hyper-

trophied and infected. The nurse says, "Well, I would send them to the family physician."

The examiner says, "But the family physician is a drunkard and isn't able to take out tonsils and probably would say there is nothing the matter with them." The nurse hesitates but is admonished to send that patient to the family physician and to no one else, so far as the Board of Health is concerned. We want these patients to go back to the man of their own choice, and I think that is the only attitude which the Board of Health can take in the matter. (Applause.)

SCHOOL EXAMINATIONS

Now comes the question of the examination of the school child. What shall we do with regard to the examination of children in school? Is there to be in this only diagnosis, or is there to be treatment? The position of the State Board of Health is, first (of course this was the object primarily in having school inspection), to eliminate from the school those children who are infectious, the child who is either a carrier by virtue of the fact that he has had the disease of some germ that he can transmit to others and produce illness. Out of that has grown something more. That program isn't very successful when you stop to think about it. The fact is that the child is most infectious probably in the incubation period and the prodromal period and that is the time he is in school, and when he finally breaks out with rash of scarlet fever much of the damage has been done. That was very well demonstrated, as you probably all know, in the Shorewood schools where they excluded children from school on suspicion. Then they got away with something in the way of prevention of diseases. But the inspection that waits until the child is ill with the disease is almost, perhaps not quite, like closing the door after the horse is taken out.

Then the second activity that we have in medical inspection is to examine minutely and closely this child to see if it has some defect that can be remedied that will prevent in later life incapacity and illness, and perhaps make that child a ward of the state if he is not treated. In that the attitude of the State Board of Health is that the examiner in the schools—of course in many places it is left to the board of education and the State Health Department has nothing to do with it, but where we have, this is our attitude—shall recommend what shall be done with the child, and the

recommendation as to what shall be done with him goes to the parents. The parent is to decide whether it is to be done or not and who is to do it. That program, I think should have the unqualified support of the medical profession.

PERIODIC EXAMINATIONS

The State Board of Health is a firm believer in and advocate of periodical health examinations as a means of preventing especially the chronic diseases, and in maintaining economic efficiency in the citizens of the state, but we believe in it especially because of its educational value. I am not sure that we shall ever get very far in the prevention of these chronic diseases until the individual himself realizes the advantage and the necessity of providing for himself, and at his own expense, good health and its maintenance. Most men are willing to spend of their means to provide for insurance for their families in case of death, but few take the trouble of providing for insurance against disease and death.

Apropos of this Haven Emerson of New York says:

"While no excuse is needed for prevention of communicable disease, for education in schools and for that matter all other groups of the community, I question the soundness of any policy of official or volunteer service, whether for adults or children, which for the sake of quick and easily proved results, relieves the beneficiary or the guardian of the primary duty of seeking and paying for the service."

Industrial hygiene provided by the employer is less valuable than when organized as self-protection by the worker.

School health service will continue to be a makeshift until parents themselves provide the equivalent of it for their own children at their own expense.

Prenatal work will never be more than superficially effective until the fathers of the United States take the job of buying it for their wives.

No legal means of compelling eugenics will accomplish results whether in preventing mental or physical ills. Benefits of inheritance depend on the factors of social conduct determined by personal and free standards, and selection.

The two factors chiefly responsible at present for betterment of adult health are the services of the visiting nurse and the periodic medical examination, and it is from these that I particularly ex-

pect further and more gratifying results because of two main reasons: first, that they cannot become universal quickly, and second, that they cannot be provided out of tax money or through volunteer services for the whole community. It will take at least a generation of education of the public, and quite as much of physicians and nurses to have these two factors used widely and intelligently enough to impress all the people.

Of course, the teaching of hygiene is another matter.

INDUSTRIAL MEDICINE

Now we come to some health activities that are not exactly health activities of the state and other medical activities, industrial medicine, for instance. We have two types of industrial medicine; we have the industry, for instance, which employs a physician to take care of the accident work in its plant on a definite fixed salary per annum. I think, on the whole, the medical profession has no fault to find with that. We have the industrial plant which furnishes not only services in case of accident, but furnishes also medical care in case of illness, and then to go a step farther, not only the medical care for the employee, but for his family as well. I think it is properly within the scope of any employer of labor to conserve the economic productivity of his labor by doing this if he sees fit, but he should do it on the basis of an adequate salary, or, if it is done on the fee basis, the fee must be exactly the fee which is current in that locality. I think here is one place in which there may be danger of the physician bidding in on a fee basis for work which he does not know the extent of, and when injustice may be done to his fellow practitioners.

Then there is the public health activity of the insurance companies. I wonder how much the insurance company has increased longevity and how much the insurance company is to be credited with the diminution in morbidity that we have realized. The Metropolitan Life Insurance Company, carrying several million policies, many of them for only very nominal sums on children, provides its patrons, its policyholders with a series of pamphlets for the purpose of educating them and a visiting nurse service. They say that for every dollar they have expended—and they spend about a million dollars annually—they have a return of \$7,000,000 in premiums that are paid by people who would be dead if they hadn't had this service.

I think that rather points the way to us in public health activity, the visiting nurse and the educational system. Now the Metropolitan Life Insurance Company is saying to every policyholder, "Once a year we would be very happy to have you go to your physician for a periodic health examination for which we will pay." That is going to help to keep these men well.

Along the line of the work that the Health Department is doing, we have been in close contact with the establishment of hospitals in the state. I think years ago the State Health Department established first the hospital at Wales. It was finally turned over to the State Board of Control. Now it has assisted in the establishment of the county sanitarium and is giving service to the boards of health in the various counties of the state, whether they have or have not the county sanitarium. I believe that the purposes and functions of the county board of health might be very much augmented and that a good deal of health work particularly in the rural districts could be carried on from this office of the county board of health. We send from the department at Madison a deputy health officer to meet with the county boards of health at stated intervals, and could outline such activity. This board could function to conduct all clinics and health activities of the county with the aid of local physicians and then eliminate the expense and antagonism of the outsider.

VOLUNTARY ORGANIZATIONS

In addition to these, there are some voluntary organizations that are engaged in public health activity, and the position of the voluntary health organization is very important in the maintenance of the public health. I think this, however, is true: J. J. Durant, in an article in the *American Public Health Journal*, says: "Voluntary health agencies that work on specific problems should transfer their activities as soon as a governmental agency is ready to receive them and continue the work with efficiency. In giving over the work the agency's interest in the work should not cease. Established operating organizations with such broad minds are not always met with. The clash of ideas and personalities and magnifying of small unimportant details is too frequent when changes such as these are contemplated or are in the process of accomplishment. It is as important for health departments to confine their activity to health work as it is to extend their activities to the

whole health field. Medical relief should be left to hospitals; some welfare and much social service work and moral and religious reform to their proper agencies."

I believe the voluntary health organization has a very important function. In my city and county, for instance, we attempted for a number of years to secure through the council a visiting nurse. We couldn't effect it. Then came the women's club and they raised the funds and hired the nurse and she did her work for a year or two, and the city saw the value of it and took over that nurse. Then they provided a county nurse for tuberculosis work, and for a year or two or three this nurse was working in the field. Then the county board saw the value of that work and they took over the expense of the county nurse. Now we have in our city a child welfare worker. The funds, again, are supplied by civic organizations of the city, and we expect that within a year or two, when we have demonstrated the value of this service, the official body will take over the responsibility and provide the funds.

The voluntary organizations have a very important work to do in educating the public to the need of some of these services. Such, in the main, is the idea of the policy of the State Board of Health. We believe primarily in education of the public, educating the public moreover to know that the scientifically trained, the educated practitioner has a service to render, is capable of rendering a service which the charlatan and the follower of a cult cannot possibly give. We are trying to educate the public to differentiate between men who are called doctors. We are attempting to put on an educational campaign that will tell people more about the diseases to which flesh is heir.

We have put on a campaign repeatedly, as you know, on the cancer problem, and today when this question came up in the medical society and report made that we did not have funds to send out the booklet on cancer to the practitioners, I felt that the State Department of Health would be very glad to contribute to this fund so that this booklet might go into the hands of the practitioners.

INTEREST FOR SOCIETY

The interest of the State Board of Health is not in the individual but in society. In any controversy it defends society against the individual. It is not concerned with the treatment of the individual except insofar as such treatment is essential in the protection of the public and to the extent of being very interested in securing for him the services of properly trained, competent, scientific medical men.

Our policy is not to conduct clinics except for demonstration. Our policy is not to enter the field of diagnosis except for the purpose of preventing the spread of disease, that is in preventive medicine. Our policy is not to treat any patients. Our policy is to attempt to educate the public so that they shall realize the value of the periodic health examination, and we hope in time that people will at least have as much interest in their own bodies, in their health as they have in the automobiles which they drive. This is the idea of the Board of Health; this is the work which it is carrying on for which it has had in the main most cordial support of the profession of the state, and has acquired now a position under which almost anything it asks from the legislature is granted, because of the service which it has rendered. (Applause.)

Some Problems of the Medical Profession*

BY M. L. HARRIS, M.D.,

Chairman of the Judicial Council, American Medical Association,
Chicago.

Human suffering in one form or another has always existed and seems to be inseparably connected with life. Suffering in another has always excited a feeling of sympathy in one and a desire to give relief to the sufferer. With increasing intelligence and the growth of knowledge, the

causes of, and the means of affording relief from, suffering became better understood and there arose a group or class of individuals who devoted their time and attention to mitigating the sufferings of others. From this humble origin the modern physician has developed. As is well known, in early times those who ministered to the afflicted were actuated largely by sympathy or a

*Read before the 79th Annual Meeting, State Medical Society of Wisconsin, Milwaukee, September 16, 1925.

desire to do good, and were possessed of a feeling of altruism which often had a religious basis, consequently little thought was given to the matter of compensation for services rendered, but remuneration was limited almost entirely to gratuities, or honoraria. This same practice prevailed to some extent even down to the last generation, when many doctors of the so-called "old school" seldom or never sent out bills, but were content to receive as compensation for their services whatever their patients were inclined to give. Anything beyond this was held to be unethical. Is it any wonder, then, that a profession that for so many ages has inherited such a tradition, a profession born and bred in humanitarianism and altruism, a profession that by precept and practice has always been charitable, and, as it were, stood aloof from the commercial world, should have acquired so little knowledge of sound business methods?

Medical men devoting their lives to the pursuit of knowledge relating to the relief of human suffering developed a spirit of individual liberty which gave little thought or attention to other problems of life, and swept away by their altruism they have given freely of the results of their labor for the benefit of mankind. It is no wonder, then, that such a profession has been a ready tool in the hands of propagandists for the advancement of socialistic ideas and has fallen an easy victim of commercial institutions for the enrichment of their stockholders. Lawmakers the world over have recognized these frailties of the medical profession—frailties when viewed in the light of intelligent business principles—and have made use of them for personal advancement or for the furtherance of political ends. Medical men, by having these frailties appealed to, have frequently performed services voluntarily and without compensation which it was the plain duty of individuals themselves, or of the state, to provide for. Had the profession been less unsophisticated and had more thought been given to the ultimate harmful effects of such voluntary services on the welfare of the people as a whole, these errors would not have been committed. The fact that these services were given voluntarily, though thoughtlessly, has often been seized upon by lawmakers as an excuse for making them compulsory. In this way the medical profession during the past few years has done more for the advancement of socialism

than anything that has been said or done by ardent proponents of this fallacy.

MISTAKEN CILARITY

This should not be interpreted as conveying the idea that the physician should not engage in benevolent, altruistic, and charitable works. On the contrary, there is a humanitarian side to the practice of medicine which no right-minded physician ever forgets, and no person who does not feel and appreciate this should engage in that profession. No one is called upon to do real charity more frequently than the physician, and be it said to his credit, no one responds more readily or more cheerfully. In addition to this individual charity, the physician should always do his duty as a citizen and take his part with others in all proper work of this kind, but there is a vast difference between the physician giving charity to the needy one who applies to him for such services and the giving of his time and energy to the public in a matter that it is the plain duty of the public to provide for. In matters of this kind, all other persons engaged in the work are suitably compensated for services, but the physician is expected to donate his. There is no question that many of the schemes of a socialistic nature along this line that have been promoted and fostered by the state, in which the physician either voluntarily or involuntarily has been brought into service, were much better for the welfare of the people if left undone. The physician should give more heed and study to matters of this kind and learn to discriminate between those things that are truly altruistic and those that are not.

It will be granted without discussion that the physician is an essential sociologic factor in the present day community, and that his business is the care of his patients' physical and mental conditions in health and disease, and that if he is to be successful in his work the conditions of modern civilization demand that it be conducted in accordance with sound business principles. Business, in its common and limited sense, means the particular line of work in which one is engaged as a means of a livelihood, but it also has a broader and more general significance, namely, the general principles which underlie the numerous transactions and exchanges that take place between individuals or organizations. Experience has shown that unless these fundamental principles be followed, disaster in one form or another is likely to result sooner

or later. It is an oft-repeated saying and one with which most investment salesmen will agree that the doctor as a rule is the most gullible and unsophisticated of investors, and from what has been said the reason is quite obvious. The ancient traditions of his calling have made him altruistic; listening constantly to the complaints of his patients, which he accepts as true since they are seeking his services for their own benefit, he has become unduly credulous; always endeavoring to inspire hope and confidence in others, he becomes hopeful and confiding; knowing little of fundamental principles of business he seldom analyses propositions to see if they are sound; but accepts them with his credulous, hopeful, confiding, unsophisticated mind, often with disaster.

This is not said with the intention of offering offense, but simply to call attention to a bit of psychology which may help to explain some other frailties of the physician's mind when it comes to certain other matters that concern his own business. It will be assumed that every physician, naturally, wishes to be successful in his life's work. At the present time, in order that he may properly prepare himself for his work, it is necessary for him to invest not only considerable money but also many years of time and hard work, and if it be granted that the physician is a necessary, or even a desirable factor in the present-day social structure, it must be admitted that he is entitled to a fair return on his investment of capital and labor. The usefulness of a physician to the community in which he lives depends upon his knowledge and skill and his ability to keep up with the rapid advancements in his profession. In order to maintain himself at a proper standard of efficiency, it is necessary that he constantly add to his capital investment, and this he can do only if he receive sufficient remuneration for his services. Unfortunately, physicians frequently cut off their just returns by reason of their own follies.

OUR OWN FOLLIES

Attention will be directed to two ways in which this is brought about. In the first place, physicians are shirking their work and lose many patients, and often considerable income, by referring too many cases to commercial laboratories, to so-called diagnostic laboratories, etc., to do those things which they themselves should do. Many of these laboratories are owned and con-

ducted by laymen for purely commercial purposes, and the ethics of the profession are not always respected. Most of the ordinary examinations and tests necessary to a correct diagnosis can, and should be, made by the physician in his own office. If he is too busy to do this work himself he is busy enough to have an assistant to do the technical work for him, but he alone should judge of the import and value of the findings co-ordinated with the history and physical examination of the patient.

Any physician who sends a patient to one of these laboratories to have an ordinary urinalysis made is not only losing a fee to which he is entitled, but is running the risk of losing the patient as well, for many patients sent to such laboratories fail to return to the doctor. The next time that patient thinks he should have his urine examined, he does not go to the doctor, who, he thinks, will simply send him to the laboratory, but he goes directly to the laboratory for the examination, and while there the suggestion is frequently made that he have a blood examination, or some other test made, and some laboratories go so far as to send word to those whose urines have been examined by them that for a specified sum per annum they will examine the urine as often as is necessary and will advise the patient as to what should be done for any abnormal condition that may be found. This means not only a financial loss to the doctor but also the loss of confidence in the doctor by the patient. If a doctor is not able or willing to make the ordinary tests and examinations which every doctor should do for a diagnosis, but has to send the patient to a commercial laboratory, he should expect that the patient will soon reason, and not illogically, that he might as well go to a laboratory at once for a diagnosis, and many are doing just this thing.

There are a few tests, of course, that cannot be made outside of a laboratory, but the doctor should be careful not to patronize any laboratory that furnishes reports directly to the patient. Again, there are laboratories that advertise to give all kinds of serologic and injection treatments, which should be given only by the physician himself, or under his immediate supervision and, unfortunately, there are physicians who send patients to such laboratories for these treatments and receive a commission, or a division of the fee from them for the work thus referred, of course a dishonest

and reprehensible practice. These laboratories are constantly encroaching on the field of the practice of medicine to the direct loss of income and prestige of the physician, a condition for which the physician alone is responsible.

COMMERCIALIZING MEDICINE

The next matter to which attention is directed is the increasing number of commercial organizations, stock companies created ostensibly for the purpose of making periodic health examinations or special examinations and tests, but all of them practicing medicine to some extent in one form or another. The claim is made by some of having an altruistic basis, but the payment of dividends on stock outstanding belies these claims. By appealing to the altruism of the profession with the usual sophistry, many medical men have been induced to lend their aid to these institutions not realizing that the money which went to pay the dividends to the stockholders came out of their own pockets. Commercial organizations furnishing periodic health examinations cannot exist without the aid of the medical profession and it is a curious bit of psychology that blinds the medical man to the fact that a corporation is getting the money for the work which he does. The physician makes a thorough physical examination of an individual sent to him by the corporation, makes out a complete report and sends it to the Home Office. The corporation pays the physician a small nominal fee for doing the work and then charges the individual examined a much larger sum for transmitting to him the results of the examination. It would seem that nothing but a childlike lack of ordinary business judgment would permit one to thus sell for a mess of pottage valuable services which another turns into gold. If the physician's examination and report have any value, he is entitled to receive for them what they are worth. It is pure sophistry to claim that their worth is increased by being passed through an office, perhaps a thousand miles away. In fact, the value of the examination to the patient is much greater when communicated to him by the physician who makes it and who has thus come in direct contact with the individual than it can possibly be when passed through an absent third party. Hence, by the corporation method the patient fails to receive full value for the money paid to the corporation, and the doctor fails to receive proper

compensation for his services. But the monetary loss to the physician and to the patient is not the only loss sustained by this kind of corporation practice. There is the loss of that personal relationship between physician and patient which is of so much importance to the welfare of the latter. The claim is made that such corporations act as an intermediary between the patient and the physician. When it becomes necessary for an intermediary or a runner, to act in order to bring the patient and the physician together, the physician has lost his independence and self-respect, and the decadence of the profession is assured.

THE REMEDY

These in brief, are some of the baneful influences that are operating to-day to rob the profession of its influence, its independence, and its income. We should remember, however, that they are due largely to the frailties and follies of the physician himself, and that the remedies lie in his own hands. If these influences are to be counteracted, physicians must be qualified and willing to give the high grade of personal service to which the patient is entitled. They must evince that same benevolent, altruistic, and charitable spirit that has always characterized the profession, but they must show commercial organizations that are making tools of them for profit that they will conduct their professional matters on sound business principles.

FEDERAL PERMIT DISTRICT CHANGED

Because of the uncertainty as to the permanence of present reorganization work in the federal prohibition permit districts, this Journal has withheld positive instructions to Wisconsin physicians until its next issue. At the present time the state is divided into an eastern and western district to be administered from Chicago and St. Paul, respectively. The division is based on the eastern and western judicial districts of the state.

Physicians in the eastern judicial district of Wisconsin must at present deal through the Chicago office, while physicians in the western judicial district must at present deal through the St. Paul office.

The eastern judicial district of Wisconsin comprises the counties of Brown, Calumet, Dodge, Door, Florence, Forest, Fond du Lac, Green Lake, Kenosha, Kewaunee, Langlade, Manitowoc, Marinette, Marquette, Milwaukee, Oconto, Outagamie, Ozaukee, Racine, Shawano, Sheboygan, Walworth, Washington, Waukesha, Waupaca, Waushara and Winnebago. All other counties in the state are in the western judicial district.

It is hoped that an authoritative announcement may be made in the December issue of this Journal.

Obtaining Maximum Results From a Health Magazine*

BY JOHN M. DODSON, M.D.,

Secretary Bureau of Health and Public Instruction, American Medical Association,
Chicago.

OUR OWN

"During the commencement exercises at the University of Wisconsin last June, one of her alumni to be honored by honorary degrees was Dr. John M. Dodson, of Chicago, who received the degree of doctor of science; for the same reasons that Dr. Dodson was honored by the University, we are glad to have him with us this evening. Dr. Dodson is a graduate of our own University. He practiced medicine in the state of Wisconsin. While his life during the past few years has taken him to Chicago, we still claim him as our own. I need not tell you of Dr. Dodson's career in medical education. I only make mention of the fact that it has been Dr. Dodson who has directed the editorial policies of *Hygeia*, our own publication, and it is through him that it has now attained such a splendid standard. No one is better qualified to discuss the subject of his selection and of our interest, 'Obtaining Maximum Results from a Health Magazine,' than Dr. Dodson."

President Wilson Cunningham.

It is more than good of you to give me the opportunity by such invitations as this to come home once in two or three years, for I still feel more at home here than in any other medical group that I know, even in Chicago where I have lived. Wisconsin was my native state. I began the practice here and the Wisconsin State Medical Society was the first one that I knew.

I feel especially fortunate in being here to witness the fine and richly deserved honor which you have conferred upon Dr. Bock. I knew him in his student days. He formed the habit of picking up prizes and awards of one sort or another very early, for I remember he was the recipient of the Daniel Brainard prize at the time of his graduation from Rush.

I am glad to say a few words with regard to *Hygeia*, your magazine. I want to emphasize the fact that it is yours. It is your child. Every one of you is in a measure responsible, because your representatives, through the House of Delegates of the American Medical Association, were

responsible for the birth of this Journal.

Hygeia, with its small beginnings, had in Wisconsin in 1923 a circulation of 464; a year ago, 1,226, and today 1,365. These subscriptions are, of course, divided between physicians and laity. The circulation of *Hygeia* as a whole was about 26,000 a year ago, and today practically 36,000, a gain of 10,000 in a year. That is a very substantial gain. We have come to the conclusion that the way for *Hygeia* to progress is by a slow, steady growth, developed by its adaptability for educational purposes, particularly in the schools and through the doctors' offices. We are anxious for criticism or comment of any sort that you feel is warranted by what appears in the magazine, and we are especially anxious that you should aid in promoting its use in the schools.

Our hope for betterment of health in this country must come largely through the education of the coming generation, and we are seeking to make *Hygeia* especially adapted to that purpose. I should like to call attention to a method of increasing the circulation which was developed first here in Milwaukee. One of your members thought of the happy idea of asking his office attendant to secure subscriptions. She has been extremely successful. The small commission allowed for this purpose was a considerable inducement, and the effort is now being made to promote a campaign of that sort by other office attendants. A commission is allowed on renewals as well as for original subscriptions.

LAY EDUCATION

I should like to say a few words with regard to the general proposition of medical and health education of the public. Anyone who has read the medical journals for the last two or three years and has attended meetings of the public health associations and of physicians for that matter, can hardly have failed to be impressed with the fact that all men interested in the health of the nation and in health betterment are persuaded that the one prime essential is the education of the people. I was glad to hear Dr. Fiedler lay so much emphasis on that phase. What the public health officials can do for the people through the matter

*Read before the 79th Annual Meeting, State Medical Society of Wisconsin, Milwaukee, September 16, 1925.

of pure water supply and sewage disposal and prevention of the spread of contagious diseases, protection against poor and spoiled food, has been done quite effectively, but the vastly more important matter of personal hygiene and of public support of public health activities can be brought about only through the health and medical education of the public. Great as are the possibilities of the central national organizations like the American Medical Association, the U. S. Public Health Service, and even of the State Medical Societies, they cannot do very much directly. They can be most effective through helping local organizations, for if this business of educating the public is to proceed effectively, it must be by making it local, that is, localizing it in every community. Primarily, of course, the individual physician is the most important factor of all. He has the opportunity as he comes in contact with his patients and the families of his patients of educating them in the most effective way. Wisconsin physicians have always done this, but we have all been so busy in later years in keeping up with the rapid march of medical science that I think perhaps we have been less active in this matter of educating the public than our predecessors.

ORGANIZATION WORK

The central organizations can, as I say, help by supplying material and furnishing stimulus and incentive, and as a basis for that it occurred to us last winter that it would be well to ascertain what actually is being done, how much activity is going on in the various local organizations, in this matter of educating the public. The agencies concerned can be divided into three groups: public health officials, state and local, including of course or leading up to the U. S. Public Health Service; the state and local medical societies; and the volunteer organizations, such as the tuberculosis associations, the societies for the control of cancer, for the conservation of vision, for the arrest of venereal diseases, for nervous and mental disease control, and more recently, the one for heart disease.

In conference and correspondence with representatives of Surgeon General Cummings, the Bureau of Health and Public Instruction, of which I have charge, agreed that if his office would undertake to find out what the local and state public health agencies were doing, we would undertake to find out what was going on in the medical

societies. I think you will be interested in the summary of the findings so far as we have gone.

Letters were addressed in the form of a questionnaire to the state medical societies first, that is, to the secretaries. Of the forty-eight letters sent out, forty replies were received. Something over 800 letters have been sent out to county medical societies, and approximately 450 replies have been received.

The first question was this: Has your society engaged in any organized activities for promoting the education of the public in matters of health and preventive medicine? To this question 24 state societies answered yes; 16 no. About two-thirds, you see, or three-fifths were yes. Of the county societies, 145 replied yes, and 282 no. There were in many of these questionnaires some questions that were not answered, but I will not read that list.

The second question asked was: Does your society publish a health bulletin or journal for the lay reader? Six out of 40 of the state societies replied that they published bulletins of that sort; 34 did not. Of the county societies, only 8 published such bulletins; 422 did not.

This question was asked: Do the newspapers of your community print health or medical items supplied by your society? Twenty-three of the state societies answered yes, that they were supplying information to the newspapers; 17 no. Of the county societies, 195 said yes, and 222, no.

PAID ADVERTISING

It was asked: Does your society pay for space in the newspapers? You know in a number of places the societies have felt that this matter of publicity was so important that they could afford to buy space in the newspapers, a plan which I believe to be of very doubtful value, because I don't believe there is any difficulty in getting material published by the newspapers free of cost, if it is of the right sort. The replies to this were that 2 state societies had bought space and 38 had not. Thirty-three county societies had paid for space for this purpose; 398 had not.

We asked: Have you used *Hygeia*, the magazine of health published by the American Medical Association for the lay reader, in any way in your health propaganda? In reply to this, 20 said yes and 20, no, and 119 county societies said yes, and 314, no.

(Continued on page XXII.)



THE JOURNAL BOOK SHELF

- The Cornell Clinic, 1921-1924.** Medical service on a self-supporting basis for persons of moderate means. A report issued by the Committee on Dispensary Development of the United Hospital Fund of New York, Michael M. Davis, executive secretary. April, 1925. New York City.
- Lectures, Clinics and Discussions on Electro-Physiotherapy.** Held at Logan Square Masonic Temple, Chicago, October 20 to 24, 1925, under the auspices of H. G. Fischer & Company, Inc., Chicago.
- A Manual of Physical Diagnosis.** By Austin Flint, M.D., LL.D., late professor of the principles and practice of medicine and of clinical medicine in Bellevue Hospital Medical College. Ninth edition, revised by Henry C. Thacher, M.S., M.D., attending physician, Lincoln Hospital and assistant attending physician, Roosevelt Hospital, New York. Illustrated. Price, \$3.25. Lea & Febiger, Philadelphia and New York, 1925.
- Medical Clinics of North America.** Boston Number, May, 1925. Volume VIII, Number VI. Octavo of 278 pages and 47 illustrations and complete index to Volume VI. Paper, \$12.00; cloth, \$16.00. W. B. Saunders Company, Philadelphia and London.
- Surgical Clinics of North America.** New York Number, April, 1925. Volume V, Number II, 337 pages with 105 illustrations. Paper, \$12.00; cloth, \$16.00 net. W. B. Saunders Company, Philadelphia and London.
- Personal Hygiene Applied.** By Jesse Feiring Williams, M.D., Prof. of Physical Education, Teachers College, Columbia University, New York City. Second edition revised. 12mo of 414 pages, illustrated. W. B. Saunders Company, Philadelphia and London, 1925. Cloth, \$2.00, net.
- Clinical Medicine for Nurses.** By Paul H. Ringer, A.B., M.D., Chief of Medical Service of the Asheville Mission Hospital, Asheville, N. C.; on staff of Biltmore Hospital, Biltmore, N. C. Illustrated. Second revised edition. Price, \$2.50. F. A. Davis Company, Philadelphia, 1924.
- A Textbook of Practical Therapeutics.** With special reference to the application of remedial measures to disease and their employment upon a rational basis. By Hobart Amory Hare, B.Sc., M.D., LL.D., Prof. of Therapeutics, Materia Medica, and Diagnosis in the Jefferson Medical College of Philadelphia. Nineteenth Edition. Enlarged, thoroughly revised and largely rewritten. Illustrated with 144 engravings and 8 plates. Price, \$7.00. Lea & Febiger, Philadelphia and New York, 1925.
- Practice of Pediatrics.** By Charles G. Kerley, M. D. Formerly Professor of Diseases of Children, New York Polyclinic Medical School and Hospital, and Gaylord W. Graves, M. D., Associate in Diseases of Children in the College of Physicians and Surgeons, New York City. Third Edition, revised and reset. Octavo of 922 pages, 150 illustrations, Philadelphia and London: W. B. Saunders Company, 1924. Cloth, \$9.00 net.
- A Compend of Gynecology.** By William Hughes Wells, M. D., Late Asst. Prof. of Obstetrics in the Jefferson Medical College; Asst. Obstetrician in the Maternity Dept. of the Jefferson Medical College Hospital. Fifth Edition, revised and enlarged, with 167 illustrations. Price \$2.00, net. P. Blakiston's Son & Co., Philadelphia.
- New and Nonofficial Remedies, 1925,** containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Jan. 1, 1925. Cloth. Price, postpaid, \$1.50. Pp. 461+XL. Chicago: American Medical Association, 1925.

BOOKS RECEIVED FOR REVIEW

The Normal Diet. By W. D. Sansum, M.S., M.D., Director of the Potter Metabolic Clinic Department of Metabolism, Santa Barbara Cottage Hospital, Santa Barbara, Calif. A simple statement of the fundamental principles of diet for the mutual use of physicians and patients. Illustrated. Price \$1.50. C. V. Mosby Company, St. Louis, 1925.

Old and New Viewpoints in Psychology. By Knight Dunlap, Prof. of Experimental Psychology in the Johns Hopkins University, Baltimore; Formerly President of American Psychological Association. Price, \$1.50. C. V. Mosby Company, St. Louis, 1925.

The Faith, the Falsity and the Failure of Christian Science. By Woodbridge Riley, Ph.D., Member of the American Psychological Association; Lecturer at the Sorbonne, 1920; Author of "American Thought from Puritanism to Pragmatism;" Frederick W. Peabody, LL.B., Member of the Massachusetts Bar; Author of "The Religio-Medical Masquerade;" Charles E. Humiston, M.D., Sc.D., Prof. of Surgery, College of Medicine, University of Illinois. Fleming H. Revell Company, Chicago.

Gynecologic Urology. By Lynn Lyle Fulkerson, A.B., M.D., F.A.C.S., Asst. Prof. of Gynecology, New York Post Graduate Medical School; Instructor in Obstetrics and Gynecology, Cornell University Medical School. With 166 illustrations including 86 original and 14 color plates. P. Blakiston's Son & Company, Philadelphia.

Some Fundamental Considerations in the Treatment of Empyema Thoracis. By Evarts A. Graham, A.B., M.D., Member of Empyema Commission, U. S. Army; Prof. of Surgery, Washington University School of Medicine. Illustrated. Price, \$2.50. C. V. Mosby Company, St. Louis, 1925.

Methods in Surgery. By Glover H. Copher, M.D., Instructor in Surgery, Washington University School of Medicine. Including outlines for case history-taking, preoperative and postoperative care of patients, rou-

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tines, diets, etc. Price, \$3.00. C. V. Mosby Company, St. Louis, 1925.

Symptoms of Visceral Disease. By Francis Marion Pottenger, A.M., M.D., LL.D., F.A.C.P., Medical Director, Pottenger Sanatorium for Diseases of the Lungs and throat, Monrovia, Calif. A study of the vegetative nervous system in its relationship to clinical medicine. Third edition with eighty-six, text illustrations and ten color plates. Price, \$6.50. C. V. Mosby Company, St. Louis, 1925.

Personal and Community Health. By Clair Elsmere Turner, Associate Professor of Biology and Public Health in the Massachusetts Institute of Technology. Illustrated. Price, \$2.50. C. B. Mosby Company, St. Louis, 1925.

Eye, Ear, Nose and Throat Manual for Nurses. By Roy H. Parkinson, M.D., Visiting Oculist and Aurist to St. Joseph's Hospital, San Francisco, Calif. Illustrated. C. V. Mosby Company, St. Louis, 1925. Price, \$2.25.

Feeding and the Nutritional Disorders in Infancy and Childhood. By Julius H. Hess, M.D., Prof. and head of the department of Pediatrics, Univ. of Illinois College of Medicine; chief of Pediatric Staff, Cook County Hospital. Illustrated with forty-two engravings in the text and one full-page colored plate. Fourth revised and enlarged edition. Price, \$4.50, net. F. A. Davis Company, Philadelphia, 1925.

Development of Our Knowledge of Tuberculosis. By Lawrence F. Flick, M.D., LL.D., Co-founder of the Rush Hospital for Diseases of the Chest; Organizer of the Pennsylvania Society for the Prevention of Tuberculosis. Price, \$7.50. Lawrence F. Flick, M.D., 738 Pine St., Philadelphia, 1925.

Physiological Chemistry. An intermediate textbook with experiments. By C. J. V. Pettibone, Ph.D., Associate professor of Physiological Chemistry, Medical School, University of Minnesota, Minneapolis. Third edition. Price, \$3.25. C. V. Mosby Company, St. Louis, 1925.

Rejuvenation By Grafting. By Dr. Serge Voronoff, Director of the Dept. of Experimental Surgery of the College de France; Assistant Director of the Biological Laboratory at the Ecole des Hautes Etudes. Translation edited by Fred F. Imianitoff, B.A. With thirty-eight illustrations. Adelphi Company, New York.

Objective Psychopathology. By G. V. Hamilton, M.D., Director of Psychobiological Research, Bureau of Social Hygiene, Inc., New York City. C. V. Mosby, St. Louis, 1925.

Kidney Diseases and High Blood Pressure. By Frederick M. Allen, M.D. Practical manual for physicians and patients. The Physiatrie Institute, Morristown, N. J.

Medical Clinics of North America. Volume IX, Number II, New York number, September, 1925. Octavo of 271 pages, with 24 illustrations. Paper, \$12.00; cloth, \$16.00 net. W. B. Saunders Company, Philadelphia and London.

The Art of Medical Treatment. By Francis W. Palfrey, M.D., visiting physician, Boston City Hospital; Instructor of Medicine, Harvard University. Octavo of 463 pages. Cloth, \$4.50, net. W. B. Saunders Company, Philadelphia and London, 1925.

BOOK REVIEWS

WILLIAM A. MOWRY, M. D.,

Editor

Any scientific publication reviewed in this column may be obtained for inspection. Orders for such inspection should be directed to Mr. W. M. Smith, Librarian, Medical Library, University of Wisconsin, Madison, and should be placed through your local librarian wherever possible. Where there is no local librarian orders may be sent direct. These new books will be loaned for an inspection period only.

Bacteria in Relation to Man. By Jean Broadhurst, Ph.D., Associate Professor of Biology, Teachers' College, Columbia University. A Study-Text in General Microbiology. Octavo 147 illustrations, 304 pages. J. B. Lippincott Company, Philadelphia and London. Price \$3.00.

"Bacteria in Relation to Man" is an admirable combination of laboratory outline and textbook which is designed to serve as an introduction to microbiology. Molds, yeasts, bacteria and protozoa are considered in their relation to man. Excellent bibliographies for further study are included. P. F. C.

A Text-Book of General Bacteriology. By Edwin O. Jordan, Ph.D., Prof. of Bacteriology in the University of Chicago and in Rush Medical College. Eighth edition, thoroughly revised. Octavo of 752 pages, fully illustrated. W. B. Saunders Company, Philadelphia and London, 1924. Cloth, \$5.00, net.

The new edition (8th) of Jordan's General Bacteriology maintains the high standard of excellence set by its predecessors. It is one of the textbooks that is so clearly written and well organized that the student or physician finds his way easily and is not discouraged by a mass of unnecessary detail. This edition has been brought up to date by the addition of new material on tularemia, botulism, scarlet fever, etc. P. F. C.

The Health-Care of the Baby. A handbook for mothers and nurses. By Louis Fischer, M.D., Attending physician to the Willard Parker and Riverside Hospitals; Chief attending pediatricist to the Zion Hospital of Brooklyn; Medical director of the Infanorium. Fifteenth edition, completely revised. Funk & Wagnalls Co., New York and London, 1925.

The American Journal of Diseases of Children (Aug., 1925) says of this book: "This so-called handbook for mothers, nurses, and physicians," in its 15th edition, completely revised, "is so full of inaccuracies and misstatements, gives so little usable information for mothers, nurses, or physicians, and is so definitely below the standard set by other books of this type that it cannot be recommended."

I quite agree with this impression.

C. J. C.

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This mixture contains 56.61 grams of carbohydrates, thus supplying material that is utilized rapidly for heat and energy. The predominating carbohydrate is MALTOSÉ, which has the highest point of assimilation of any of the sugars, is immediately available as fuel and may be safely given in comparatively large amounts. The daily intake of protein from the employment of this formula is 15.54 grams, an amount calculated to be sufficient to replace depleted tissues and to provide for new growth. There is present in the mixture 4.32 grams of salts for replenishing inorganic elements.

The suggested modification furnishes nutrition in keeping with the character and amount of food elements best adapted to the particular demands of infants in an extreme state of emaciation and serves well as a starting point in attempting to meet the nutritive requirements of these undernourished babies.

Mellin's Food Co., 177 State Street Boston, Mass.

OH, DOCTOR, DOCTOR!

By H. A. J.

The oldest medical book in the world is soon to be published. When Professor James H. Breasted of the University of Chicago departed for Armageddon to take up the popular pastime of scooping out relics, he left behind him a promise that on his return he will finish the translation of the ancient papyrus, a physiological treatise going back to 1700 B. C. Although Professor Breasted declared that he had not yet finished the translation, he was willing to quote several extracts from this old manual, which has, by the way, the curious surname of Edwin Smith. Smith's Introduction to Physiology, as I suppose it would be called now, begins with the head and goes down systematically, through eyes, mouth, throat, etc., but never gets beyond the spine. In fact, the papyrus ends in the middle of a sentence, in a case concerning a spinal injury, with the life of the patient suspended with the publication.

Scarcely had our ancient physician begun his treatise when he discovered that he needed a vocabulary. For the brain, for instance, he finally invented a word, and then was forced to think up a metaphor to explain what he meant by his new word. "He likened the convolutions," says Professor Breasted, "to the crenelations of embattled walls, and said that it crinkled like the slag that covers molten metal." Further on in the treatise there is the account of an unfortunate man who had a knife wound in his throat, but whether from fighting or eating the papyrus does not say. Because of the inconvenience of this aperture the patient was troubled with thirst and fever—everything he drank ran out the knife-hole. Although we shall have to wait until Professor Breasted gets back from relic-scooping before we can learn what happened to the man, it is only fair to state that the physician felt that he had the situation well in hand. In most of the forty-eight cases little or no mention is made of materia medica. The physician who wrote the treatise merely orders his future practitioners to put the patient on a normal diet and await results, from which one might infer that the life insurance law of averages was known even then.

In addition to this straight-forward physiology the book branches off, under the hand of another

author, into the more tenuous realm of spells, incantations and magic potions. One section deals with spells to change the direction of the wind, in deference to the wide belief that plagues were carried by a pestilential wind. Another part gives the "Incantation of Transforming an Old Man Into a Youth of Twenty." Here the procedure was worked out better than it is at the present day. It was not necessary to purchase a menagerie of animals, and then be cut up. All you needed to do in Egypt was to inhale a little burning incense and listen to the incantation. If that was too difficult, you could purchase a magic ointment guaranteed to rejuvenate the skin of an old man and thus give him the appearance of youth. It was especially required that this ointment was to be kept in a beautiful bottle of crystal or of carved precious stone.

All this medical knowledge looks impressive, and when Professor Breasted finishes his translation it may look still more so, but all I can do is wonder why, after such a brilliant start, the medical profession should have rested on its laurels for three thousand years before making many further strides.

PUBLIC HEALTH NOTES

The state board of health, in semi-annual session, amended the rule for the control of mumps. The new regulation reads as follows:

"Cases must be reported to the local health officer within 24 hours after discovery by attending physician or responsible head of family, if a physician is not employed.

"All persons with mumps must be isolated for two weeks after case is reported to health officer and one week after disappearance of swelling. Well children in family may return to school, but must be excluded upon the appearance of fever, cold, or glandular swelling."

The board announced the resignation of Mrs. Mary P. Morgan, for six years director of the bureau of child welfare, who goes to Florida to reside, and the assignment of Dr. Cora S. Allen, of the bureau's medical staff, to succeed her.

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The Presidential Address

Origin and Progress of Medicine to the Beginning of the Twentieth Century*

BY WILSON CUNNINGHAM, M.D.

President, State Medical Society of Wisconsin, 1925
Platteville

Ladies, guests, and fellow members of the Wisconsin State Medical Society, it is with pride and sincere appreciation of the honor bestowed upon me that I appear before you to-night as president of the seventy-ninth annual meeting of this society.

I beg you to bear with me while I attempt a short résumé of the history and development of medicine. That custom may not be violated I have avoided a scientific subject; and though historical facts, as gleaned and appropriated from various authorities, will replace philosophy, the subject is at least possible of cultural value. Medicine is the noble and honored profession which each of you, as members of this society, dignify by your service. That service is manifest by the relief or amelioration of suffering, the prevention of disease and the prolongation of life. Much happiness depends upon our individual and collective efforts.

It is difficult for us to realize that we are living in the midst of the most wonderful achievements in the science and art of medicine, of all ages. Since the time of Pasteur medicine has made greater progress than it did in all previous centuries combined. Now, as in the past, two things indicate the progress of our profession—the prolongation of life and the increase of happiness. Though we are increasing life and happiness to a greater extent than ever before, the results of medical progress in a few generations hence will probably seem as marvelous, in comparison to our present achievements, as many of our present accomplishments would have seemed in the recent past. The history of medicine leads in transitional stages from magic and superstition in its beginning to the application of the knowledge gained from the physio-biochemical laboratory of

the present. Our daily use of asepsis, serology, and the physio-biochemical and roentgen-ray laboratories is so much a matter of routine that we do not realize the magnitude of these achievements.

That the origin of medical practice preceded civilization by a span of many years has been established by archaeological research. During the Stone Age, for example, man had made such progress in surgery that the difficult operation of trephining was often performed with the only implements at his command—those of stone. Medicine, as a science, is of comparatively recent development, but as an art it is known to have been practiced nearly thirty-three centuries before the Christian era. Wall paintings and bas-reliefs, recently discovered, picture observations by the Egyptians on the distinctive features of plants and animals, and even speculation on the circulatory system.

To recount transitions from one period to another, in even a detailed exposition of the early history of medicine, would necessitate much indefiniteness, and there would be numerous gaps. Somewhere in the prehistoric past there must have been a beginning for medicine, since ages later we suddenly find authentic records of certain definite and rather detailed knowledge.

Physicians are referred to in the scriptures as early as 1700 B. C., and there are a dozen or more specific regulations in the Code of Laws of Hammurabi, King of Babylon, about 2100 or 2200 B. C. In the section of the Code concerning "Physicians and Veterinary Surgeons" are rules fixing the conditions of their practice, regulating their charges, and specifying penalties for malpractice. These are among the earliest authoritative references to medicine.

It was the practice among the early Babylonians and Lucitanians to place the sick or injured in

*Presented at the 79th Annual Meeting, State Medical Society of Wisconsin, Milwaukee, Sept. 17, 1925.

public places where passers-by might prescribe for them out of their own personal experience. In time the experiences and cures, with their symptoms, were inscribed in the temples. We are told that the temples of Canopus and Vulcan at Memphis became the principal repositories for these records; and as these temples were under the control of the priests it naturally followed that the records became their property. Eventually a system of medicine was developed and practiced exclusively by the priests, who were thus also physicians. The medical code compiled from these experiences appeared in what Diodoras called the *Hierra Biblos*, or *Sacred Book*. If the practitioner followed to the letter the direction as given, he was absolved from any blame in case of a fatal ending; but if he deviated from these rules and there was a fatality, the penalty was death.

It is sometimes said that history is best presented by giving chronologically the biographies of great men. Thus, did time permit, we might with profit study such characters as Hermes among the Egyptians and Aesculapius among the Greeks; who among all the ancients excelled in medicine.

The followers of the deified Aesculapius, together with the priests in his temples, formed a caste and transmitted from one to another their medical knowledge. This knowledge gradually extended to the laity with an eventual development of the medical art outside the priesthood. In time this created a demand for classified medical knowledge which evolved itself into the development of schools of medicine.

Of these schools, one of the foremost was that on the island of Kos, from which was graduated one who became the most famous in all medical history—Hippocrates. He was born 460 B. C. on this island, and is held as the father of medicine. He became the physician of the most celebrated temple dedicated to Aesculapius at Kos. Hippocrates began the rationalizing and codifying of medical knowledge, a vast task to which his herculean mind added theorization. His motto was, "Theory is the flower, not the root of experience." The first real blow given to magic and sorcery was his elaboration of the rule, "No disease comes from the Gods, one more than another, each acknowledging its own manifest and cause." "Natural powers were the healers of disease," according to his teachings. He treated by regulating the diet, by the use of friction, sea baths,

venesection, and by administering purgatives, emetics, and diuretics.

The famous oath of the Koan School, now known as the oath of Hippocrates, forms a part of the ritual of many medical societies, and is the earliest and one of the most impressive documents in the annals of medical ethics.

During the first century of the Christian Era, medicine's onward progress was championed principally by Herophilus and Celsus, and considerable scientific advance was made. Celsus, a wonderfully brilliant man, was supplanted by Galen (130-201 A. D.). Galen, one of the greatest men in medical history, was probably the first vivisectionist. He exposed muscles of living animals and demonstrated the motion of bones by alternate tension and relaxation of opposed muscles or groups of muscles. About 500 treatises are credited to Galen; they cover many subjects, among them discourses on pneumonia and pulmonary tuberculosis. He also described the classical symptoms of inflammation. The knowledge and teachings of Hippocrates, Aristotle, and Galen were the principal influences which controlled the progress of medicine until the seventeenth century.

Following the period of Grecian supremacy in medicine, influences brought about by territorial conquest gradually made Greece subservient to Roman power, and theorization was replaced by experience, or empiricism. Medical knowledge continued then with but little change or progress until the sixth century, when Aetius produced a compendium on medicine, and Alexander of Trolles wrote on fractures and mental diseases, and described taenia and *Ascarides lumbricoides*. For the next thousand years, during the time designated as the Middle or Dark Ages, medicine made but little progress, if not actual retrogression. There were superior characters during each century but none with sufficient power, dominance and following to deliver medicine from the chaotic abyss into which nearly all knowledge was driven by continued barbaric wars. It is not improbable that medicine would even have entered oblivion had it not been for the efforts of the clergy, who became once more the custodians of medical knowledge and in time disseminated this knowledge through the cathedral schools which were the forerunners of the later established universities.

But, backward as was Western Europe during the Dark Ages, there was one race which kept

alive a vigorous research in medicine—the Arabs. The period of their activity may be called the Arabian Era, and this era contains several great men. In the year 850 at Rei, a city in Persia, Rhazes, the first of these, was born. He became a great physician and one of the most distinguished professors at Bagdad. He did much to preserve for the future what was known of medicine at that time by composing 237 monographs on medicine and the natural sciences. He compiled an extensive encyclopedia taken from both Greek and Arabian sources, and was the first to describe hydrophobia, erysipelas, smallpox, and measles. While directing the Grand hospital at Bagdad he reported the suturing of abdominal wounds with strings of the harp made from the twisted intestines of sheep. Though in his prime a court physician, because of his generosity and compassion for the poor he died destitute and blind at the age of eighty.

Avicenna (980-1037), successor to and greater than Rhazes, was born in Bokhara. He was the first to codify Greco-Arabian medicine, and in spite of his attempt to make medicine a metaphysical science, he became the greatest and most widely known authority in medicine after Galen.

The last leading physician of the Arabian era of the Middle Ages was Maimonides (1135-1204), a Jewish physician, poet, and philosopher of renown. Many other physicians attained prominence of a lesser degree, and all united in the fight against magic, witchcraft, necromancy, and diabolical remedies.

Italy, the center of the early revival of Greek learning and the general awakening of the human mind following the Dark Ages, produced the most daring scientists of the early Renaissance. The outstanding name among these is Andreas Vesalius, the father of anatomy, though not the first to dissect the human body. Vesalius (1514-1564) became professor of anatomy in the University of Padua at the age of twenty-two. Here he did many dissections and autopsies and published his famous work. Autopsies, however, were finally his undoing. While performing an autopsy upon a great nobleman, on opening the chest cavity, he found the heart still pulsating. He was condemned to death by the Holy Inquisition, but saved by the intervention of the king, who commuted his sentence to a penance journey to Jerusalem. On this journey he was shipwrecked, and died from hunger and exposure.

Paracelsus (1493-1541) was one of the leading men in internal medicine of this century, but also one of the most puzzling characters in medical history. He had an unusually ingenious medical mind and a forceful character, but like so many during this restless period he was an itinerant student, roaming about Europe and earning his way as he went. He imbibed much of the greatest learning of each country he visited, and finally in 1517 became professor of medicine at Basle. He was of an antagonistic, questioning disposition with a tendency to belittle most conclusions which were not his own. This attitude was not in keeping with that of the decorous and classified minds of the leaders of a great and dignified university. He endeavored to disseminate the doctrine that the organic world was composed of three fundamentals: salt, mercury, and sulphur. He has to his credit, however, the introduction of mercury as a cure for syphilis, and was first in establishing a relationship between endemic goitre and cretinism.

The shining light of surgery during this time was Ambrose Paré (1510-1590), a Frenchman who at the age of nineteen became army surgeon in the army of Francis I against that of Charles V. He proved to be a surgical genius with a pleasing personality, and was finally honored with a professorship in surgery and was made surgeon to Charles IX. He rationalized the army treatment of gunshot wounds by ligating the bleeding vessels and applying a simple dressing instead of cauterizing these wounds with boiling oil. He wrote a treatise on surgery, and also did much to improve obstetrics. At this time the mortality of women at childbirth was 50 per cent in normal labor and an infinitely higher rate in complicated labor. During this century the first cesarean section upon a living woman was performed by Jacob Nufer, a Swiss sow-gelder, upon his own wife.

During the seventeenth century there was developed the beginning of realism in medicine. Scientific men more and more broke away from superstitions and dogmas. One of the greatest discoveries was made in 1628, by William Harvey (1578-1657), of Folkstone, England, when he first described the circulation of the blood. The theory, like many theories in their infancy, was warmly disputed by large numbers of the leading medical men. Harvey, besides giving birth to physiology, did much to reform embryology. He announced his doctrine *omne vivum ex ovo* and

contradicted the theory that the complete individual existed pre-formed in the egg.

Contemporaneously there were many earnest and notable workers in the natural sciences, among whom were Galileo, Romer, and Sir Isaac Newton. The first microscope, devised by Cornelius Drebel, finally aided in promoting study and research; and John Van Helmont (1577-1644) discovered carbon dioxide. Probably the first lectures in medicine, given in America were delivered in 1647, by Giles Firmin at Harvard College on anatomy. Shortly after this a course was given in medicine.

In 1683 von Leeuwenhoek, a great microscopist, who possessed nearly 250 microscopes and over 400 lenses, made his announcement concerning microorganisms, but not being a physician he could make no practical use of his discovery, and its potential usefulness unfortunately lay dormant for nearly two centuries, when Lister and Pasteur applied it to relieve suffering humanity. Von Leeuwenhoek was the first to describe the crystalline lens, spermatozoa, and histological detail of voluntary muscle fibre; he also demonstrated the capillary network joining the arteries and veins.

Marcello Malpighi (1628-1694), an Italian and physician to Pope Innocent XII, became also a renowned microscopist and is now considered the father of histology and the founder of descriptive embryology. His name is preserved by the nomenclature of the Malpighian layer of the skin; his histological studies included the vital organs of the body.

The first direct blood transfusion from one animal to another was done by Richard Lower (1631-1691) in 1665. Wirsung discovered the duct of the pancreas which bears his name. Among other names of this period which are preserved by the anatomical parts called after them are Wharton, Glisson, Bartholin, Schneider, Peyer, Brunner, Nuck, Willis, Mebon, Graaf, Havers and Sylvius.

Thomas Sydenham (1624-1689), one of the most practical men of the century and sometimes called the English Hippocrates, was an unusual clinician. He made a trifold classification of symptoms, naming those symptoms consequent to the action of the agent producing the disease cardinal symptoms; those resulting from nature's attempts at cures, accidental symptoms; and those incident to the application of therapy, artificial symptoms. During this period quinine was introduced into England and intravenous medication

was brought in by Sir Christopher Wren, the famous architect of St. Paul's cathedral.

In the eighteenth century we find a continuation of the realistic and constructive work of the previous century with a gradual development of the importance of the clinic and practical medicine. Of the anatomists and physiologists of this century, many of the names sound familiar to us today from our studies of the sciences that they promoted. Among them were the English surgeon, anatomist, and pathologist Cheselden (1688-1752), who published a treatise on anatomy and suprapubic section; the dextrous lithotomist, Scarpa; the French anatomist, Winslow (1669-1760), best known by the foramen with his name; and Albrecht von Haller (1708-1777), the originator of such notable experiments in physiology as those concerning irritability and sensibility. Among the embryologists of eminence of the period may be mentioned Casper Frederick Wolff, Oken, Meckel, Tiedemann, and Panda.

Among the comparative anatomists were Douglas, the Scotchmen John and William Hunter, who became famous London surgeons and anatomists; Peter Camper (1722-1789), an eminent Dutch surgeon; and François Xavier Bichat (1771-1802), who established histology. Bichat died of consumption at an early age, and thus was cut short a brilliant, active, energetic worker, who is credited with doing as many as 700 autopsies during one winter's course. He contributed nine volumes to medical literature.

At this time medicine was followed by many profound students, a number of whom were also versatile writers. In 1745, John Astruc published his *Tractus Pathologicus*. Giovanni Morgagni (1682-1772), the founder of pathological anatomy as a science, first described vertebral gumma, mitral valve disease, tuberculous kidney, and heart bloc. He also identified the clinical features of pneumonia. Thus, we find physiology, histology, and pathology, three important branches of medicine, founded during this century. Besides this, therapeutics and materia medica were classified.

Among the physicians of note during the eighteenth century may be mentioned William Cullen, William Heberden, John Huxham, and Benjamin Rush. Benjamin Rush, a Philadelphian (1745-1813), is pre-eminent in early American medicine. He was a member of the Continental Congress and one of the signers of the Declaration of Independence. He was a neuro-

logist and alienist as well as an accurate observer of disease, and many of his descriptions are today considered classic. He advocated the extraction of decayed teeth as a measure for the relief of certain diseases. As a therapist he recognized but two kinds of remedies—stimulants and depressants. He considered that the principal duty of a physician, after making a diagnosis, was to decide which of these was indicated in a given case.

During this period other natural sciences made rapid progress. Stephen Hales (1677-1761) founded modern chemistry. Some of the discoveries made by the workers in the then new science were far reaching. Joseph Black, a Scotch chemist, in 1757 discovered carbonic acid gas, or as he called it "fixed air." This made possible Lavoisier's discovery of the interchange of oxygen and carbonic acid gas in respiration; upon this knowledge the tests in metabolism of today are dependent. Among other discoveries which later led to far-reaching advance in physiochemistry was the discovery of nitrogen by Rutherford, which was soon followed by the discovery of oxygen by Priestley Schule.

Among the anatomists and surgeons of note during the latter part of the eighteenth century was John Warren (1753-1815), one of the founders of the Boston Medical Society in 1780, who in 1782 became the first professor of anatomy and surgery in the Harvard School of Medicine. He is credited with the first shoulder joint amputation. He was succeeded by his son, John Collins Warren (1778-1856), who founded the *Boston Medical and Surgical Journal* in 1828, and under whose auspices ether was first publicly administered for surgical anesthesia. Other notable surgeons of this period were Lawrence Heister, who was succeeded by John Hunter (1683-1758), a German surgeon, and he by John Abernathy. Percival Pott (1749-1787), whose name is familiar in connection with Pott's fracture and Pott's disease, was a London surgeon whose great work was in the field of bone and joint diseases. Others to be mentioned are Chopart, well known because of the foot amputation which he developed, and P. J. Desault (1744-1795).

Steel lock forceps were introduced in 1774 by Smellie, and in 1778 William Hunter wrote of the "Division of the Symphysis Pubis." Sir Charles Bell made the discovery that the posterior roots of the spinal nerves were sensory nerves, and the

anterior roots, motor nerves. The latter part of the eighteenth century witnessed great reform in the treatment of the insane, who for the first time, were segregated from convicts and criminals and treated for functional diseases of the brain.

The greatest event near the close of this century, and one of the notable events in the history of medicine, was the discovery of cow-pox vaccination by Edward Jenner. Innoculation for smallpox had been performed as a method of protection for a thousand years before Christ. In 1721, Reverend Cotton Mather, of Boston, called the attention of various American physicians to the method, then in vogue in Turkey, of inoculation with the virus from the active disease of smallpox. Dr. Boylston, of Brookline, Massachusetts, who later settled in Boston, corresponded with members of the British Royal Society, and as a result, determined to put the method to actual proof. He inoculated his son with the virus of natural smallpox, and within a year he had inoculated 247 persons with a mortality of about 2 per cent, while the mortality of approximately 6,000 cases of smallpox acquired in the usual way was about 14 per cent. Boylston was violently attacked, especially by the clergy, in spite of this unusual showing, and was even threatened with hanging.

Edward Jenner, a native of Berkeley, England, was born in 1749 and died in 1823. During Jenner's apprenticeship he had learned of the immunity against smallpox possessed by those who had contracted cow-pox, which was a matter of popular observation. He related the idea of vaccination to his preceptor, John Hunter. On Hunter's advice, he investigated, and as a result introduced the systematic practice of preventive inoculation against smallpox by cow-pox vaccination. The first vaccination was performed in 1796, when he vaccinated a boy with the matter from the hand of a milkmaid who had contracted cow-pox in milking. Two years later in 1798, Jenner published his memorable work and hoped thereby to eliminate smallpox from the human race. He acquired great honor and fame, received substantial emoluments from his government, and was made honorary citizen of the city of London. The practice of his method for preventing small-pox spread and endured. While the procedure has saved millions of lives and saved many more millions of facial disfigurements, our constantly occurring epidemics would indicate that

his dream of protecting the human race against smallpox is unfulfilled merely because his teachings have been insufficiently put in practice. Humanity owes Jenner an everlasting debt of gratitude.

The eighteenth century has been designated by historians as the golden age of medicine. This, it is said, was due to the idealistic attitude of the period and the high esteem in which scholars of the learned occupations were held.

During the first seventy-five years of the nineteenth century, there was constant though slow progress in medicine. The gradual accumulation of the knowledge of pathology and the gradual correlation of the general sciences to clinical medicine produced what was then considered scientific or exact medicine.

During this period epoch-making clinical observations were carried out in various countries by untiring workers with brilliant minds. In France we find such men as Pierre Louis (1787-1872), who named typhoid fever and inaugurated the statistical study and classification of diseases; René Laennec, of whom I will speak later; Pierre Bretonneau (1771-1862), who performed the first successful tracheotomy for relief in diphtheria. Jean Borilland (1796-1881), who observed the clinical connection between endocarditis and arthritis; Phillipe Ricord (1799-1889), who differentiated syphilis and gonorrhoea; Dominique Jean Larrey (1766-1842), Napoleon's surgeon-in-chief, whose work in the classification of military surgery has been enduring; Alfred Valpeau (1795-1867), who introduced the bandage for the arm which bears his name; and Guillaume Dupuytren (1777-1835, an operative surgeon whose description of contracted palmar fascia (one of the least of his accomplishments) bears his name. He died from empyema without operation, stating that he preferred to die at the hand of God rather than at the hand of man. Others of note are August Nélaton (1807-1873), who devised the soft rubber catheter, and whose name is prefixed to the "line" used in describing the anatomy of the hip; Paul Broca (1824-1880), the founder of brain surgery and discoverer of the speech center of the brain which bears his name; François Magendie (1783-1855), an experimental physiologist who introduced bromine, iodine compounds, and the alkaloids, strychnine, morphine, brucine, and veratrine into our pharmacopeia; and

Claude Bernard (1813-1878), the brilliant physiologist.

Of those in England whose accomplishments are to be remembered may be mentioned Richard Bright (1789-1858), whose name is associated with various types of nephritis; Thomas Addison (1793-1860), who in 1859 first described pernicious anemia and suprarenal disease, thereby marking the beginning of the study of the internal secretions; Thomas Hodgkin (1798-1866), who described the lymphadenoma known by his name; James Parkinson (1755-1824), whose name is associated with paralysis agitans and who gave the first English description of appendicitis; and Sir Astley Cooper (1768-1841), an extensive surgical worker, who did considerable original work in the repair of hernia.

Ireland was no less renowned for its famous clinicians, as here we find Robert Graves (1796-1853), whose name is associated with exophthalmic goiter; William Stokes (1804-1878), whose name is recalled in connection with Stokes-Adams' disease and with Cheyne-Stokes' breathing; Dominic Corrigan (1802-1880), whose labors with heart disease resulted in naming aortic incompetency as Corrigan's disease and the water hammer pulse as Corrigan's pulse; Abraham Colles (1773-1843), whose name is remembered by the Colles' wrist fracture and by Colles' law, which states that the mother of a congenitally syphilitic child is immune to infection from the child; and William Wallace (1791-1837), who introduced potassium iodide in the treatment of syphilis.

During the century Austro-Germany was represented by what was known as the new Vienna School. Among these were the following: the pathologist Karl von Rokitansky (1804-1878), who performed about 1,000 autopsies a year for nearly forty years; Carl Wunderlich (1815-1877), known for his study of animal heat; John Schoenlein (1793-1864), who described purpura rheumatica, sometimes known as Schoenlein's disease; Joseph Skoda (1805-1881), who carried on the work of interpreting the sounds of percussion and auscultation mostly as left by Laennec and Auenbrugger; Ignaz Semmelweis (1818-1865), an incessant worker in obstetrics through whose efforts in inaugurating cleanliness, mortality was considerably reduced; Bernard von Langenbeck (1810-1887), a successful operator who aided in the progress of surgery when, in 1861, he established *Archiv für klinische Chirurgie* which still

remains one of the high class journals of surgery; George Stromeyer (1804-1871), a military surgeon who specialized in orthopedic surgery and Albert von Graefe (1828-1870), the founder of modern ophthalmic surgery.

We may well be proud of America's eminent leaders in medicine, surgery, and the allied sciences during this period. Among these were: Ephraim McDowell (1772-1830), a graduate of Edinburgh and a practitioner in the village of Danville, Kentucky, who in 1809 performed the first ovariectomy. This was a world wide innovation in abdominal surgery and though his operation was performed in the pre-anesthetic and pre-antiseptic days, his patient lived for thirty-two years afterwards. J. Marion Sims (1813-1883), also a country practitioner, discovered the advantages of the Sims' position and invented the vaginal speculum named after him. He later practiced in New York City where he established the Woman's Hospital; he is considered one of the founders of gynecology. James Jackson, Sr., and his son, James Jackson, Jr., (1810-1834), of Boston, first noted the prolonged expiratory sound over a tuberculous area of the lung which is known as Jackson's sign. Other remarkable men were John Ware (1795-1864); Henry Jacob Bigelow (1787-1879); Oliver Wendell Holmes (1809-1894), who in 1843 published his notable paper "The Contagiousness of Puerperal Fever;" William Gerhard (1809-1872); Daniel Drake (1785-1852); Robley Dunglison (1798-1869), publisher of *Dunglison's Medical Dictionary*; and William Beaumont (1785-1853), who proved to be a genius in scientific experimental physiology. His studies on gastric digestion and gastric motility were the fundamental experiments and observations for all subsequent physiological tests in gastric digestion.

Among the influences which aided the progress of clinical medicine and led to advance in the art of diagnosis was the development of different instruments of precision used for physical examination. These instruments made it possible to diagnose conditions with a definiteness not possible from symptoms alone. René Laennec (1781-1826), a celebrated field surgeon in the French army, discovered by accident in 1815 that the sounds of the heart could be heard more clearly by listening through a tightly wound cylindrical roll of paper. This finding led to his invention in

1818 of the wooden stethoscope. The double stethoscope, as later invented by Cammann, of New York, utilized the same principle. This invention, together with Leopold Auenbrugger's studies and deductions of the definiteness of different sounds produced by percussion over areas of varying density, aided greatly in increasing the knowledge of various diseases of the chest. Among other instruments of precision invented and perfected during this period may be mentioned the pleximeter, the spirometer, Helmholtz's ophthalmoscope, the endoscope, various speculae, the spectroscope, the sphygmograph, the thermometer, Carcia's method of viewing the larynx by the use of mirrors—the laryngoscope—and the application of electricity.

Contemporaneously, scientific workers made important discoveries and generalizations. Among these was Dalton's atomic theory. In 1827 Brown, an English botanist, observed and recorded the presence of moving particles seen in the path of a ray of light admitted to a darkened room. With the aid of a microscope, he also noted the action of vibratory particles suspended in liquid, to which the name "Brownian movements" was given. Of considerable moment to modern medicine were the discoveries of Schleiden and Schwann, in 1837-38, of the cellular structure of all vegetable and animal organisms. Charles Darwin formulated his theory of evolution; Faraday described the principles of galvanic and faradic induction; Morse invented the telegraph; Daguerre began his process of photography; von Liebig promoted the science of agricultural chemistry; and Fehling developed the quantitative test for sugar.

Among the advances in surgery at this period which might be mentioned is the invention of the chain saw by Jeffry in 1806, which aided in performing resections. This was succeeded by osteotomy and, in 1831, subcutaneous tenotomy. In 1842, the great discovery of the use of ether for anesthesia was made by Crawford W. Long and later introduced by William T. F. Morton, a dentist of Charleston, Massachusetts. At the Massachusetts General Hospital he gave a public demonstration before Warren, Bigelow, and others of the power of sulphuric ether for the purpose of producing insensibility to pain during an operative procedure. Chloroform was first discovered by Guthrie, an American, in 1831, but was first

introduced as an anesthetic by Simpson in Scotland, in 1847. Although cocaine was discovered in 1860 by Niemann Karl Koller, its remarkable properties as a local anesthetic were not established until 1884, when it was found especially valuable in eye work. Synthetic chemistry has since produced several efficient substitutes which are much less toxic and do not enslave.

Many of the important contributions to knowledge have been due to the collaboration of different workers, one acting as an incentive to the other and many times one giving, perhaps unconsciously, a cue to the other for elaboration. The truth of this statement is seen in the development of bacteriology.

Louis Pasteur (1822-1895), a chemist, who is regarded as one of the greatest scientists of all times, in 1857, demonstrated that fermentation and putrefaction were caused not by chemical forms, as Liebig had taught, but by the agency of microorganisms which he classified as aerobes and anaerobes. This demonstration revolutionized all the prevailing theories on fermentation. Pasteur also showed that if substances were kept entirely free from air-contamination, no putrefaction could occur.

These discoveries meant much to the wine and brewing industries for which the investigations were primarily made. Later Pasteur made a great contribution to the silk industry when he was able to abolish silk worm disease. Other notable achievements of his were the development of immunization against chicken cholera and against anthrax in cattle, and later his treatment by inoculations against the dread disease of hydrophobia. These discoveries not only meant much to industry but also to medical science for the prevention and relief of disease, and thereby the happiness of mankind.

To Joseph Lister (1827-1912) is due the everlasting praise for grasping the relationship of Pasteur's experiments to the dreadful mortality of urgent surgical procedures, and for his development of the theory of wound infection and the introduction of the use of antiseptics as a means of preventing or combating infection. Inestimable benefit to mankind came through medicine and surgery from his labors and those of his followers in the application of his deductions in developing asepsis. Much of Lister's work was based upon the researches of Tyndall, Pasteur, and Koch, who had established the germ nature of

infections and infectious diseases and the germicidal effect of filtration, heat, and certain chemicals.

In working out his theories Lister began with the supposition that the air contained the germs which were most active and pernicious in producing disease. He demonstrated that everything that came in contact with fresh or bleeding tissues might carry infectious material. He thus advocated, as Mott and others had done previously, scrupulous cleansing of skin, the hands of the operator and his assistants, instruments and dressing materials, and the use of antiseptic solutions for sutures, ligatures, sponges, and so forth. Every effort was made to exclude directly, or indirectly, all air from all wounds. Lister had heard of carbolic acid as a deodorant and determined to apply it undiluted to a compound fracture. After a few applications he saw there was practically no suppuration and consequently no blood poisoning. This was a joyous discovery when he recalled the startling mortality of compound fractures up to that time. He then advocated and began using carbolic acid spray for cleansing the air of the room during operation. It was soon found that the spray was very disagreeable and injurious, that strong antiseptics were injurious to the tissues and that mild antiseptics were equally effective. Soon, it was discovered that heat was sufficient to sterilize everything that could be subjected to steam or boiling water for twenty minutes or more. It was easily demonstrated that this destroyed all organic or bacterial life. This greatly simplified the antiseptic method and resulted in a transition to asepsis.

With these developments came an improved technic in surgery and the development of preventive medicine by improved methods of sterilization and care of the infectious and communicable diseases, all of which redounded to the credit of medicine and surgery.

Before this period, and within the memory of some of our oldest practitioners, surgeons were fearful of the result of even minor operations. A minor amputation was considered a formidable operation, for death was only too likely to result. Abdominal procedures and operations on the joints were performed only when dire necessity demanded. The mortality of compound fractures was about 70 per cent; that of major amputations at least 50 per cent. Mortality rates were so excessively high, especially in hospitals, that

patients could be persuaded to enter them only as a last resort. At times epidemics of puerperal fever resulted in the death of almost every lying-in woman in a hospital.

By the use of antiseptics and asepsis, and of anesthetics to abolish pain, surgery developed by leaps and bounds. Frederick S. Dennis has said, "No other science can demonstrate its ability to save so many human lives or to ameliorate their condition."

Following the wonderful achievements of the workers of this period we come to the last quarter of the nineteenth century. Among the English clinicians and surgeons of this period we find Sir James Paget (1814-1899), known by Paget's diseases of the nipple; Sir William R. Gowers, (1845-1915), neurologist; Sir Victor Horsley (1857-1916), who established neurological surgery as a distinct specialty; and Robert Lawson Tait (1845-1899), a well-known and successful gynecologist.

Austro-Germany was represented by the noted, brilliant, and daring surgeon, Theodor Billroth (1829-1894), Professor of Surgery at Vienna, who made the first resection of the larynx and of the stomach; Johann von Mikulicz (1850-1905), professor at the University of Breslau, commonly known by the drain which bears his name; Frederick von Esmarch (1823-1908); Herman Neth-nagel (1841-1905), a noted internist at Vienna; Ernst von Leyden (1832-1910) of Berlin; and Hugo von Ziemissen (1829-1902) of Munich.

Although the bacterial theory of disease had been well established earlier in the century by the memorable work of Pasteur and Lister, it remained for Robert Koch (1843-1910), a country general practitioner, to establish bacteriology as an exact science. In 1876 he published a paper in which he detailed the complete life history of the anthrax bacillus, with methods of culture, staining for spores, and animal inoculation. In 1882 he discovered the bacillus of tuberculosis, and his discovery of the cholera bacillus in 1884 soon resulted in the elimination of the disease by simple sanitary measures.

In rapid succession co-workers made important discoveries concerning the germs causing different diseases, and it was found that continually increasing numbers of diseases were due to bacteria or their products.

In 1880 Ebert discovered the typhoid bacillus. Following this discovery, through the later de-

velopment of vaccine for immunization together with the development of sanitation, typhoid fever was shorn of its terror. For example, during the Civil War 79,462 cases of typhoid fever were reported, with 29,336 deaths, a mortality of 37 per cent; in the Franco-Prussian War there were 74,205 cases with 8,904 deaths, a mortality of 12 per cent; in the Boer War 58,000 cases with 2,000 deaths, a mortality of 14 per cent; in the Spanish-American War, 20,738 cases with 1,580 deaths, which accounted for 86 per cent of the entire mortality during the war. In contrast to this, in 1916, when 400,000 men were on the Mexican frontier no mortality was recorded from typhoid fever; and during the Great War, when millions of men were crowded together, many times under the most unfavorable conditions, immunization and military sanitation made typhoid fever almost negligible.

In 1883 Edwin Klebs (1834-1913) and Frederick Loeffler (1852-1915) found the bacillus of diphtheria, known as the Klebs-Loeffler bacillus, a discovery which led to the development of diphtheria antitoxin by Behring in 1890.

Kitasato and Yersin in 1894 discovered the cause of the bubonic plague, and as a result it was soon found that the infection was carried from rat to rat and from rat to man by fleas. Three years later it was discovered by Ross that the "anopheles" mosquito was the transmitter of the malarial plasmodium which as early as 1880 had been found in the blood. It had long been known empirically that quinine would stop the chills and fever of malaria; but the cause or mode of infection was not understood.

Likewise, in 1898 Loos first discovered the mode of hookworm infection, although the parasite had been known for nearly eighty years. This discovery made possible the saving of hundreds of thousands of lives annually and a useful existence to millions.

The discovery of the X-ray in 1895 by Wilhelm Konrad von Röntgen and of radium in 1899 by Marie Sklodowska Curie were of inestimable benefit to mankind and did much for medicine and surgery.

Among the leading physicians of France of recent years may be mentioned Felix Guyon (1831-1920), a specialist in genito-urinary surgery; Samuel Jean Pozzi (1846-1918), a prolific writer in gynecology; Jean Antoine Villemin (1827-1892), who established the infectiousness of

tuberculosis before its cause had been discovered; Georges Dicalafoy (1839-1911), famous author of medical texts; Jean Alfred Fournier (1832-1914), noted for his teachings concerning syphilis; and Jean Martin Charcot (1825-1893), neurologist and clinician after whom certain joint deformities are named.

To review the achievements of the leading clinicians of the United States a mere listing of some of the notable names will suffice before this audience. Among them are: William Osler (1849-1919); S. Weir Mitchell (1830-1914); Jacob da Costa (1833-1900); Edward Jancway (1841-1911); Abraham Jacobi (1830-1919); William Pepper (1843-1898); William T. Bull (1849-1909); Austin Flint, Sr. (1812-1886); Nicholas Senn (1844-1909); Willard Parker (1800-1884); and last but not least to some of us who were fortunate enough to have them for teachers, Nathan Smith Davis (1817-1904); Christian Fenger

(1840-1902); and John B. Murphy (1857-1916).

Thus we bring our long survey up to the present century, and if you will permit me one word more my tale is done. I should like to point out but one among the many significant things that this survey might illustrate. Medicine was at first magic and guesswork. Only by slow and tedious degrees did it emerge from its long Dark Ages, and we may rejoice that we are alive at the beginning of its age of science. For scientific investigation, great as have been its achievements, is still in its infancy. And increasingly in the future we may expect to see it guide us. In every nation the laboratory workers—in bacteriology, in chemistry, in physiology, pathology, sanitation—are contributing bit by bit to their specialties. Medicine is no longer empirical; the laboratory sciences are our leaders, and as we enter the new era with them as our vanguard we can justly speak of medicine and surgery as art and science.

PREVENTIVE MEDICINE

W. D. STOVALL, M. D., Editor

Health Progress in Wisconsin Cities

BY S. J. CRUMBINE, M.D.

General Executive, American Child Health Association
New York City

President Harding once said, "If I were to offer a prayer, it would be first for the spiritual excellence of our nation and next for its well-being in health. In order to effect the physically perfect nation, I would begin with the children."

To this prayer and wish we can all give immediate assent. It not only appeals to our reason and emotions, but it will bear the most critical analysis as to its social and economic soundness and for its point of departure as a program in social work and personal and public health, for if enduring progress is to be recorded in these fields of human endeavor, we must build on the prophetic works of the President—"I would begin with the children."

Encouraging signs are everywhere present of the growing appreciation of modern public health work. Big business, industrial corporations, Chambers of Commerce and thoughtful people generally are visualizing the relationship between

economic progress and prosperity and the health of the worker and producer. Indeed, there are increasing numbers who are willing to subscribe to the dictum—which to the experienced health officer is axiomatic—that wealth production and economic prosperity are conditioned on the health of the worker. Therefore, the most important economic asset, with which any community may become possessed, is a full-time public health unit, properly provided with ways and means, for carrying on a well-rounded program of public health activities along modern lines.

Among these encouraging signs in Wisconsin is the Better Cities Contest, sponsored by this Conference, out of which will flow, no doubt, suggestions for improvement and progress in the various municipal activities, which, if sympathetically and diligently considered, must result in betterments in the various fields of municipal activities with which the contest is concerned.

When a doctor is called to see a sick patient the first thing he attempts to do is to make a diagnosis; that is, to try and find out from what disease or diseases the patient is suffering, for he may not wisely advise or prescribe for the illness until he has determined the cause of the sickness. In like manner suggestions for bettering health practice or conditions cannot be wisely given until after a diagnosis or survey of the city's health activities and accomplishments has been made.

Evaluating the quantity and quality of a community's health activities, presupposes a measuring device or standard by which they may be measured, and the question naturally arises, have we such a device?

The survey of the 86 cities by the American Child Health Association, and of 83 cities by the American Public Health Association and the United States Public Health Service revealed the need and the urgent necessity for some practical method whereby the results of the survey might be expressed in comparable terms, and the health activities of this large group of cities be evaluated. Therefore, much thought and time have been expended by a large group of prominent sanitarians in formulating a tentative appraisal form, which recently has been officially adopted by the American Public Health Association for such purpose. It is with this measuring stick that we have attempted to evaluate the health activities of the cities in the Wisconsin Better Cities Contest. In this connection it should be noted that the scores and the values placed on the various health activities of these cities are not intended to express the personal opinion of the members of your committee, who act as judges in this contest, but rather as the group judgment of the most prominent sanitarians and health officers in this country, whose combined judgment the committee accepts.

For the purpose of study and comparison we have taken but eight of the fourteen cities in the contest, these being in the group having a population of over ten thousand and in which the health work was sufficiently well developed as to entitle the city to be a serious contender in the contest so far as the health score was concerned. These cities are: Appleton, Eau Claire, Fond du Lac, Janesville, Kenosha, Oshkosh, Sheboygan and Wausau.

It was thought that it would be more profitable to compare these cities with the larger group of 86 cities surveyed by the American Child Health

Association than by a comparison only with each other. We have, therefore, classified and compared the relative standing of these eight cities by both methods; in one case to determine the standing in health work of the Wisconsin cities to other cities in the United States having a population of from 40,000 to 50,000; and in the other case to determine the relative standing of the eight contending cities in the Better Cities Contest. This is done with the hope that out of this comparison and self-analysis may be born the determined purpose that health conditions must be and will be improved in such places as the survey and rating schedule reveal the need of improvement.

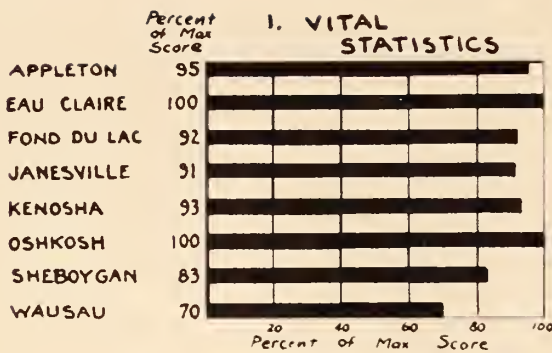
In the study of the survey of health activities of the 86 cities eleven major sub-divisions of the activities were made and, on a basis of 1,000 points for a full score, divided as follows:

	Points
1. Vital Statistics	60
2. Communicable Disease Control	175
3. Venereal Disease Control	50
4. Tuberculosis Control	100
5. Health of the child—Prenatal.....	75
6. Health of the child—Infant hygiene....	75
7. Health of the child—Pre-school hygiene	50
8. Health of the child—School child.....	150
9. Sanitation, (Food and Milk—Water and Sewage)	175
10. Laboratory	70
11. Popular Health Instruction	20
Total	
	1,000

We will, therefore, use these divisions as a basis of comparison in the Wisconsin contest.

1. VITAL STATISTICS

Completeness of reporting of births and deaths is the first essential in accurate bookkeeping of the vital data of a community; but completeness is only a beginning. Promptness in reporting and careful tabulation and analysis of the data secured must precede its use, by the health department, as an index of the need and the type of work in planning a health program, and as a measure of efficiency, in part at least, of the success of such program. In only four of the 86 cities is 100% of the full score of 60 points in vital statistics attained, while two of the eight Wisconsin cities attained 100%, namely: Eau Claire and Oshkosh. For the purpose of comparison, the 86 cities are divided into three groups; an upper, middle and lower third. The



score of the lowest city in the upper third is 70% of the total score of 60 points. This, I am glad to say, places all of the eight Wisconsin cities in the upper third in Vital Statistics, as Wausau, the lowest of this group scores 70% of the total.

2. COMMUNICABLE DISEASE CONTROL

A surprising variety of methods and procedures, in communicable disease control, were noted in the 86 cities situated in 31 different states, but in Wisconsin where one state law governs, such wide divergence was not noted. It is rather the effectiveness in the application of a common law with which the Wisconsin cities are concerned. Here we find a rather wide variation between 38% of the total score of 175 points credited to Appleton and 86% to Wausau. It is interesting to note that the highest score attained by any of the 86 cities in communicable disease control was 78% of the total points, so that Wausau's total is 8% higher than the best. Wausau is to be congratulated, but that Wausau may not be over-confident of her position in this respect, it is but fair to say that the survey of 86 cities was conducted after the most thorough study, during a week's stay in each city, by trained sanitarians, whose business it was to find all the facts. Therefore, the time element in conducting the study, together with the personal equation, may account for some of the differences in the values attained. The minimum per cent of the lowest city in the upper third of the 86 cities is 50; therefore, all of the Wisconsin cities but one, Appleton, are entitled to belong to this distinguished group. Special commendation is due to Kenosha, Oshkosh and Wausau.

Permit me to mention the lack in communicable disease control in the various cities as it would appear from the records.

Sheboygan: Lacks requirement of negative culture for release after typhoid fever; sufficient

nursing visits; diphtheria immunization and immunization for pre-school children.

Eau Claire: Lacks diphtheria immunization and sufficient nursing visits.

Janesville: Lacks spot maps and chronological charts; sufficient nursing visits; and diphtheria immunization.

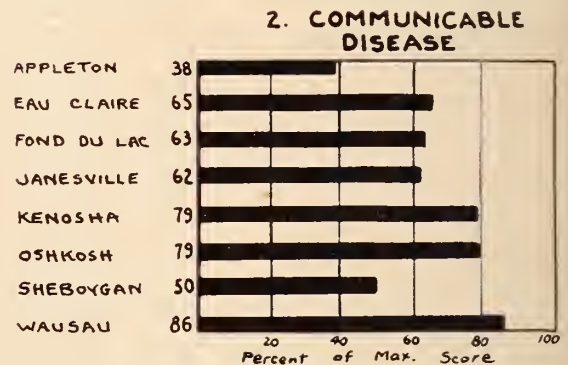
Kenosha: Lacks diphtheria immunization.

Wausau: Lacks chronological charts; sufficient diagnostic service, and immunization of pre-school children against diphtheria.

Appleton: Lacks spot maps; chronological charts; sufficient nursing visits, and diphtheria immunization.

Fond du Lac: Lacks spot maps; chronological charts; sufficient nursing and diagnostic service; and diphtheria and smallpox immunization.

In most all of the 8 cities, almost if not the complete, score of 175 points in communicable disease control, including the adoption of modern and essential forms of record keeping, could be attained with but little or no added expense. The greatest and universal lack is that of diphtheria immunization.

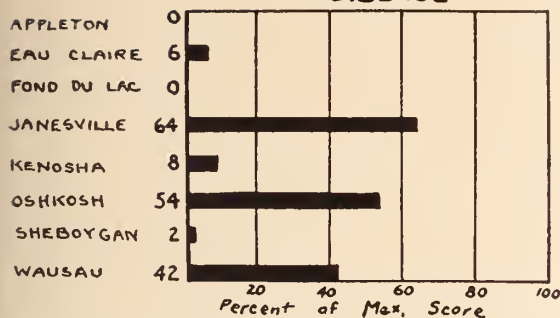


3. VENEREAL DISEASE CONTROL

This problem is so interwoven with social and moral questions as to present great difficulties in the measurement and evaluation of health activities in this field. After very thoughtful consideration it was determined that, from a public health administration point of view, but three items should enter into the rating of the weight of 50 points to the total score given to venereal disease control, namely: reporting cases, clinical service for treatment, and cases returned for treatment to physicians or clinics by nurses or social workers.

Among the 86 cities, sixteen attained 100% or the total score, and the minimum of those cities in the upper third is 82% of the 50 points.

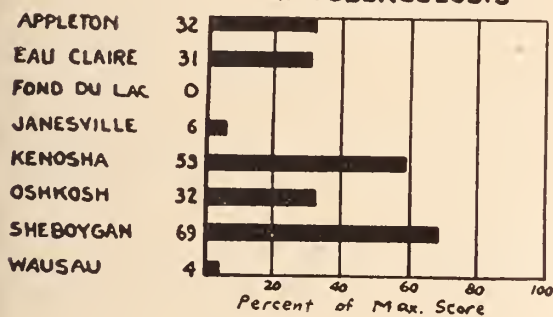
3. VENEREAL DISEASE



In this major activity none of the Wisconsin cities are entitled to a place in the upper third, and, indeed, two cities, Appleton and Fond du Lac, have no points to their credit, and Sheboygan but two.

It seems that but three of the eight cities are making commendable progress in this activity. Janesville with 64% of the score; Oshkosh with 54%; and Wausau with 42%. It can be said, therefore, that as a group there is much to be desired in the field of venereal disease control.

4. TUBERCULOSIS



4. TUBERCULOSIS CONTROL

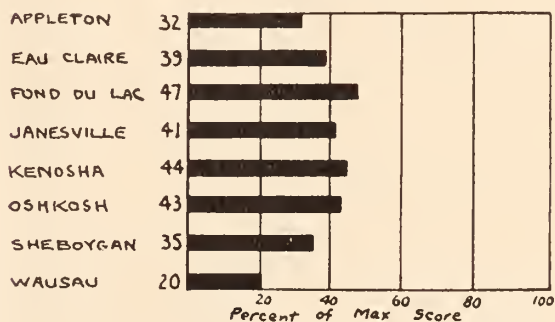
Tuberculosis still ranks as the most serious of the communicable diseases, unless we place pneumonia in this class, for it still kills larger numbers than any other—pneumonia and heart disease only, excepted. Its economic cost to the individual, the community, and the state is appalling. Organized effort for its prevention and cure has been unremitting for twenty-five years or more, during which time definite methods of control have been adopted as offering the best assurance of success; yet we find that in many of the 86 cities but little, and in a few places no, effort is made towards minimizing the ravages of the great "white plague," although it is both a preventable and curable disease.

The highest score attained in this group is 90% of the total of 100 points; the minimum score of those in the upper third is 58%; therefore, but one of the Wisconsin group—Sheboygan, with a per cent of 69—can claim the distinction of being in the upper third in tuberculosis control. Fond du Lac has no credit in this activity, Wausau but 4%, and Janesville 6%. Kenosha stands second with a score of 53. The almost universal lacks in this field are in reporting cases of tuberculosis, adequate clinical and field nursing service, and in some, that of hospitalization and open air rooms in schools.

5. PRENATAL HYGIENE

A study of the causes of infant mortality under one month of age indicates that baneful influences during the period of pregnancy are potent factors in the infant's inability to survive the hazards of the first month of life; therefore, with increasing knowledge, concerning the importance of the influence of the period of pregnancy on the child, the prenatal nursing service or clinic has been extended until it is now recognized as one of the

5. PRENATAL

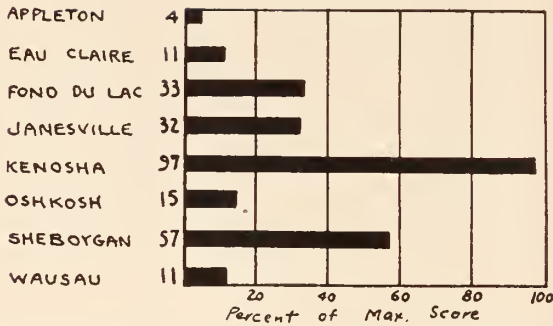


major health activities that should be established and promoted in every community.

The highest score attained in the 86 cities is 96% of the total of 75 points, and the minimum score in the upper third group is 42%. We find that three of the Wisconsin cities are entitled to a place in the upper third in prenatal or maternity hygiene work. Fond du Lac with 47% of the total score; Kenosha with 44%, and Oshkosh with 43%. Of the other five, all but Wausau which has a percentage of 20 and therefore must be classed in the lower third, are entitled to a place in the middle third.

The universal lack is in clinical and field nursing service. Generally speaking, much work

6. INFANT



remains to be done by all the cities in this important field of health.

6. INFANT HYGIENE

The reduction of infant mortality during the past decade is the most striking and stimulating accomplishment in public health endeavor. The infant mortality rate of today is but half of what it was twenty-five years ago, and experts in this field declare that a further reduction of 50% is possible.

The difficulty in determining even the simplest facts about the nature and scope of the infant welfare work was found to be unusually great; therefore, the questions asked had to be reduced to the most precise objective terms. In spite of every effort to secure complete information many questions were answered, "no record," or "information unobtainable." It is felt that this lack of information may, in many instances, operate to deprive communities of the score to which they may be entitled.

Among the 86 cities, only nine attained the full score of 75 points. The minimum score of those cities in the upper third is 76% of the total score. We find but one of the Wisconsin cities—Kenosha—as able to qualify for a position in the upper third of this distinguished group, with 97% of the total score, and but one other city entitled to a place in the middle third, namely: Sheboygan, with a score of 57% of 75 points. The other six cities, it is hoped, may not be content to long remain in the lower third.

The universal lack, with a single exception, Kenosha, is that of clinical and field nursing service. The high infant mortality in several of the cities, and, alas, too high in every city, should be a matter of public concern for every patriotic citizen.

7. PRE-SCHOOL CHILD HYGIENE

The child from 2 to 6 years of age still remains

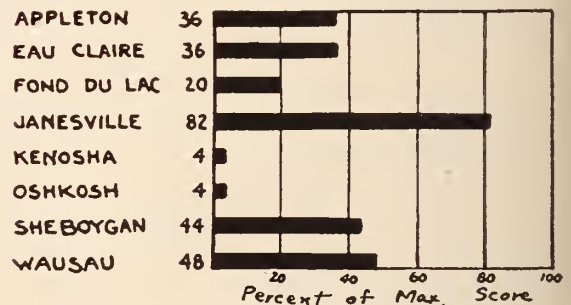
largely the neglected child of the public health movement. During the past ten years, it is true, organized health workers have become conscious of his neglected position, yet in some communities he is the recipient of but a very meager amount of organized medical and nursing service.

The appraisal form suggests two types of criteria by which to judge activities in this field, viz: The number of visits to clinics and the nursing visits to homes. From this angle of evaluation but six of the 86 cities secured 100% of the total of 50 points for standard work in this field. The minimum score of those cities in the upper third is 42% of the total score, and on that basis, Janesville with 82%, Wausau with 48%, and Sheboygan with 44%, are entitled to rank in the upper third.

Curiously enough the two cities with the highest combined scores, Kenosha and Oshkosh, are tied for the lowest place in this most important work, each having but 4% of the total score.

As in the case of infant hygiene work, the chief lack in pre-school work, in all of the cities, is sufficient clinical and field nursing facilities.

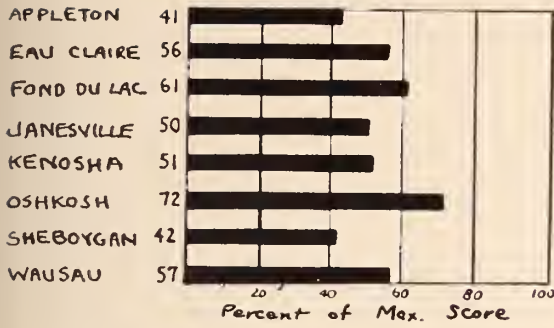
7. PRESCHOOL



8. HYGIENE OF THE SCHOOL CHILD

More than one-seventh of our population are school children. The health of the school child is thus a matter that should loom large in the public health program of a community. If all parents utilized existing knowledge to protect children against the hazards of ill-health, the necessity for organized health protection would be greatly lessened. In our present state of society, however, all parents do not surround children with adequate safeguards to health, and by reason of its collective interest in individual welfare it is a matter of wisdom for the community as a whole to undertake a certain amount of activity in this direction. Of first importance is teaching of the child in the normal functioning of the body,

8 SCHOOL



acquainting him with matters which promote and weaken health, and encouraging in him a desire to adopt advantageous habits of living.

Today, the development of health is recognized by all educational leaders as one of the *primary objectives* in all education. Dr. F. G. Bonser's statement of the *aims of education* is typical:

1. Health—maintaining life and keeping well.
2. Practical efficiency—using the tools and conventions of civilized life and the technique of a vocation.
3. Citizenship—cooperation in the regulative processes of social control and civic and social enterprises.
4. Recreation—using leisure time for enjoyment and enrichment of the higher life.

The items entering into the valuation or appraisal of this difficult and complicated health activity include: (a) Weighing of children with proper use for promoting health; (b) physical examinations, with due consideration to the completeness and thoroughness of the same; (c) correction of physical defects; (d) school sanitation; (e) health education; (f) recreation.

The maximum and minimum scores attained by those of the 86 cities in the upper third are 95% and 49% respectively of the total of 175 points allowed for full score in this important health activity. On this basis, six of the eight Wisconsin cities are placed in the upper third, namely: Oshkosh with 72% of the total score, Fond du Lac with 61%, Wausau with 57%, Eau Claire with 56%, Kenosha with 51%, and Janesville with 50%.

The lack in the various cities is noted as follows:

Sheboygan: Weighings not sufficiently frequent; educational value not utilized; physical examination by physician, and sufficient correction of defects.

Eau Claire: Serious lack of records.

Janesville: Physical examinations by physician, sufficient dental corrections and inspection, and scoring of school buildings.

Kenosha: Number examined annually limited. No records of defects corrected.

Oshkosh: Fairly satisfactory.

Wausau: No records of correction of defects, insufficient sanitary inspection of school buildings.

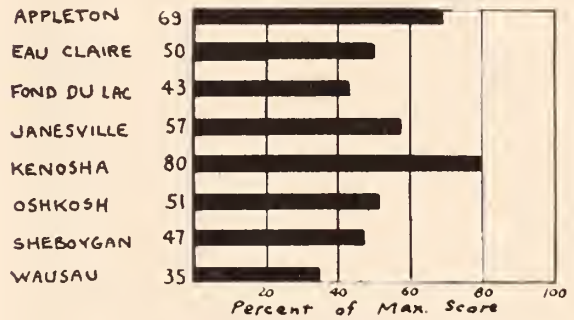
Appleton: Physical examination by physicians, no record of correction of physical defects.

Fond du Lac: Physical examination by physicians, insufficient correction physical defects.

Philip Brooks once said, "He who helps a child helps humanity with a distinctness, which no other help given to human creatures in any stage of their human life can give."

May we not give the most serious consideration to the promotion of this all important health and social work, to the end that the social, moral and health hazards encountered in our complex social order may be successfully met by an enlightened and sturdy citizenship for the oncoming generation.

9. SANITATION



9. SANITATION

Included in this title are: water supply, sewage disposal, food and milk inspection and control and such other items as might be classed under the broad term of sanitary nuisances.

The differing conditions of municipal area, topography, and general environment are designed to make a wide difference between the sanitary problems of the various cities, yet there are certain items of major public health importance that are common to all which have been selected as proper criteria for comparison and evaluation.

The average score of 67% for the 86 cities in this activity is the highest of the 11 major activities. This is exactly what would be expected

from the fact that items included in sanitation are among the oldest receiving recognition in a municipal program, and have reached the stage where methods of procedure are much more established than in any other field, with the possible exception of vital statistics, the importance of which is not so generally appreciated as is a safe water supply or the production of a safe milk supply.

The average score of the eight Wisconsin cities is 54% of the total 175 points given as a full value in sanitation. This is 13% less than the attained average of the 86 cities. The minimum score of those cities in the upper third is 74% of the total. On this basis only one Wisconsin city, Kenosha, is entitled to a seat in this class. The minimum score of those in the middle third is 61%. Therefore, but one of your eight cities, Appleton, may claim a place in this group. It is obvious to which group the other six belong.

The short-comings in this activity may be noted as follows:

Sheboygan: Insufficient number of sanitary inspections; no record of food inspections; no record of number of milk samples analyzed, bacterial count, etc.; insufficient pasteurization of milk.

Eau Claire: Lack of sufficient sanitary and food inspections, pasteurization of milk and bacteriological examinations of milk.

Janesville: Lacks sufficient bacteriological examinations of milk and water and sewer connections.

Kenosha: Insufficient number of sanitary and food inspections.

Oshkosh: Lacks sufficient sanitary inspections, pasteurization of milk, bacterial counts on milk, and completeness of water and sewer connections.

Wausau: Insufficient sanitary and food inspections, pasteurization of milk and bacterial counts of milk supply; insufficient sewer connection.

Appleton: Insufficient sanitary and food inspections, pasteurization of milk and sewer connections.

Fond du Lac: Insufficient sanitary and food inspections, pasteurization of milk, bacteriological examinations of milk and sewer connections.

In practically all of the cities a large number of credit points could be added with little or no expense, and in most of the cities better milk control is an imperative municipal need.

According to investigations made by the United States Public Health Service, there were 31 milk-borne epidemics in the United States during the first six months of 1924. One city in California reported 632 cases of typhoid fever with 48 deaths traced to raw milk. In conversation with the State Health Officer of Kansas a few days ago, he told me of three typhoid fever epidemics of milk-borne origin occurring this summer. During the five years preceding the survey of 86 cities, 18 epidemics of communicable disease occurred, definitely traceable to the milk supply. Thirteen of these epidemics were typhoid fever, 1 scarlet fever, 1 septic sore throat and 1 diphtheria. Two not stated. If we adopt the modern and very wise slogan of "safety first," we will do all in our power to hasten the day when the efficient pasteurization of milk will attain its full score.

10. LABORATORY

The local public health laboratory has been evolved to meet two needs, diagnostic and analytical, which affect the welfare of every citizen.

1. To provide the physicians of the city and the medical service of the health department with a free diagnostic service for such diseases as are susceptible of laboratory diagnosis.

2. To provide the health department's division of sanitation with the means of ascertaining, by bacteriological and chemical methods, the purity of the water supply, the milk supply, and other food supplies.

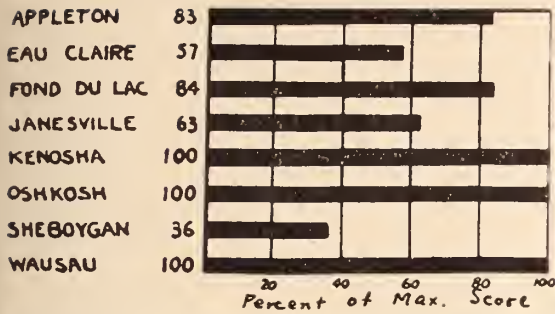
Departments of Health in only 52 of the 86 cities maintain their own municipal diagnostic laboratory service. Seventeen of these cities attain 100% or the full score of 70 points. Of the Wisconsin cities, three, Kenosha, Oshkosh and Wausau, have a full score. Two others are entitled to rank in the upper third: Fond du Lac with 84% and Appleton with 83%. All the others are classed in the middle third but Sheboygan with but 36%. In all frankness it is but fair to state that if the state and private laboratory credits were withdrawn, the picture in both groups of cities would be very different.

11. POPULAR HEALTH INSTRUCTION

The appraisal in popular health instruction is limited to those methods that are used to inform the public regarding health. No attempt has been made to measure fully or evaluate critically the scope or character of this free information service.

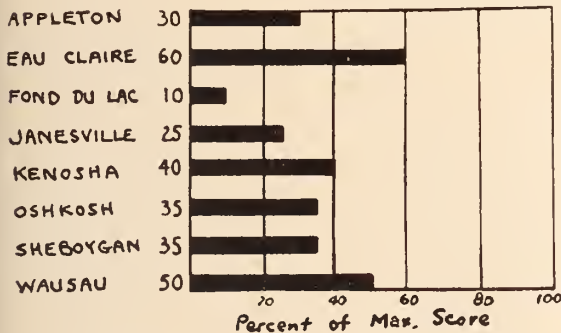
The development in the technique of health

10. LABORATORY



teaching and the formulation of devices for the transmission of health knowledge has been one of the striking achievements of this decade. Methods must be worked out to test the effectiveness of this publicity so that we may know how to spend money in this direction to better advantage, especially when there is so little to be spent. Those who pay taxes and those who make donations may well ask for proof that our publicity efforts are of value. The information gathered on this subject includes newspaper publicity, the publication of reports, bulletins and pamphlets, the use of exhibits and other graphic educational materials; the development of lectures and courses of instruction; and the organization of adult interest in *child health*.

11. POP HEALTH INSTN.



The highest score attained by the 86 cities is 58% of the total of 20 points, 5 cities tying for first place; 13 cities received no credit, whatsoever, the median score for the group being but 15% of the maximum. The minimum score of those in the upper third is 25. Therefore, all the Wisconsin cities with but one exception, Wausau, are entitled to rank in the upper group. Eau Claire, with a score of 60% of the full rate, is higher than any of the 86 cities.

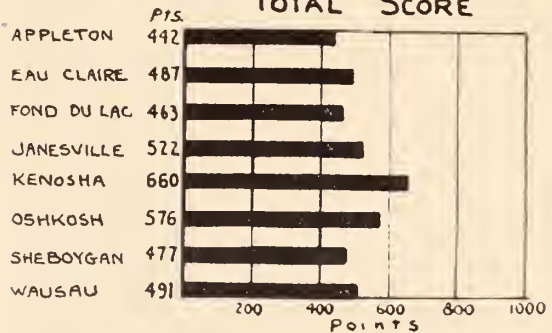
A thoughtful and cautious promotion of this health activity should be undertaken by every

municipality. Too long has the average citizen, especially those in the rural and small towns, had to depend on the patent medicine almanac, yellow literature and the itinerant medicine vendor, for his information on matters of health. Until boards of health realize their responsibility in this direction we will continue to see more money being spent for patent medicines, fake devices for the cure of incurable diseases, and quack doctors than is spent by all the departments of health for the prevention of disease and the promotion of health.

THE PICTURE AS A WHOLE

The full credit allowed in a reasonable health program is 1,000 points. No city in the 86 cities surveyed nor in the Wisconsin Contest attained a full score. The highest score attained by any of the 86-city group is just short of 800; the highest of the Wisconsin group is Kenosha with a score of 660. The lowest score of the 86 cities is just above 200; the lowest of the eight Wisconsin cities in this study is Appleton with a score of 442. If the entire 14 cities entering into the contest were taken into consideration, the contest for the lowest place between the two groups would be much closer. The average rating for the 86 cities is just about 500, and for the 14 Wisconsin cities somewhat less than that, but for the 8 cities under

TOTAL SCORE



consideration the average is 514, a most commendable showing so far as average standing is concerned. The rates for each in the order of their standing is as follows:

1. Kenosha 660 points out of a possible 1,000
2. Oshkosh 576 points out of a possible 1,000
3. Janesville . . . 522 points out of a possible 1,000
4. Wausau 491 points out of a possible 1,000
5. Eau Claire . . . 487 points out of a possible 1,000
6. Sheboygan . . . 477 points out of a possible 1,000
7. Fond du Lac . 463 points out of a possible 1,000
8. Appleton 442 points out of a possible 1,000

Information is not now at my disposal by which a critical analysis might be made of the divided responsibility of the various official and private agencies whose work enters into the credits of these scores. Reference to the report of the survey of the 86 cities, from which I have drawn heavily in compiling this report, shows that the official health departments, either alone or assisted by other organizations, are responsible for 57% of the work, and that the remainder are under official agencies other than the health department, such as boards of education, etc., or under private agencies alone. It is only in communicable disease control and sanitation that the health departments have complete control. It is altogether likely that similar conditions exist in the Wisconsin cities. It is well to remember, therefore, that the responsibility for attaining full credit in the health activity scored rests with the agency doing that work in each city, be it the official or a private agency, for I must again remind you that this is not an appraisal of the health department activities alone, but of the health activities of the entire community.

In my letter of transmittal of the report of the survey of 86 cities to our president, Herbert Hoover, I said, in part: "The outstanding facts of the survey are these:

1. Each city was found to be carrying on some organized effort for bettering the health of children, although the amount on the average is, perhaps, not over half of what is to be expected in a reasonable health program.
2. By utilizing the scientific knowledge now at hand, it is possible by better organization to increase materially the health protection of children at no great increase in cost.
3. The greatest needs are—well trained health officers, devoting undivided attention to the task; standardization of methods; more thought in explaining health work to the public, and better team work among public and private health agencies."

It is my impression that a similar summary will properly apply to the fourteen Wisconsin cities entered into this contest.

A study of Chart No. 2, showing the relative standing of the eight Wisconsin cities to the 86 cities, may throw some light on the matter and suggest the measure of effort necessary to bring each city up to the highest place attained by the best.

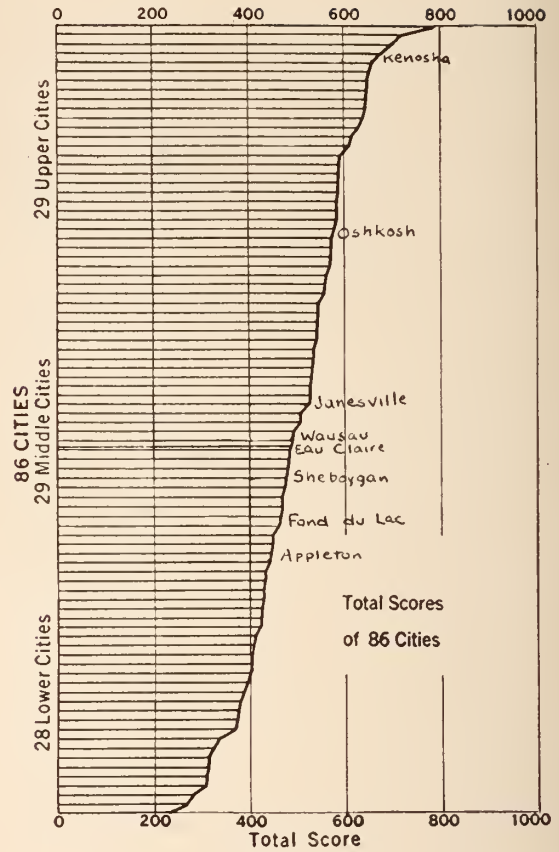


Chart No. 2

How can this be done?

General, Sir David Bruce, addressing the medical division of the British Academy of Science recently, said—"Medicine of the future must change its strategy, instead of awaiting attack, it must assume the offensive." This is the strategy of preventive medicine and modern public health—the offensive of prevention. It is far cheaper and easier to prevent disease than to cure it. The mortality and disabling casualties of sickness is too great a hazard to risk, if by any means it can be prevented. The economic return in wealth production by the proper use of this new strategy is so large and certain as to be an investment of the greatest value in dividends; of longer, happier and more efficient lives, with a corresponding reduction in the cost of preventable sickness and premature death. What city, if it but understands, will not make such an investment?

Statisticians tell us that life expectancy at birth has been lengthened 15 years in the past twenty years. With the application of knowledge that we now have it is possible to lengthen the span of

human life 15 years more during the coming twenty years. Have Wisconsin municipalities the courage and the faith to undertake such a venture? Next to Kansas, life expectancy is longer in Wisconsin than in any state in the union. Despite my former official relations in that great state I am perfectly willing you should adopt the slogan "Let's beat Kansas!"

CONCLUSION

Let me again refer to President Harding's words, "In order to effect the physically perfect nation, I would begin with the children." This

then is the point of departure in building your health program for the future, for the future of America goes forward on the feet of her children.

The faith of the world centers about the interests of the child. The hope of the world is bound up with the future of the child, and the love of the world is lavished in the care of the child to the end that the race may ever continue in its upward climb towards a higher civilization. To this high purpose may the medical profession, the Wisconsin health agencies and the State Conference of Social Work dedicate its resources, its personnel and its leadership.

The Health of the Child in School*

BY A. M. CARR, M.D.

Health Officer
Madison

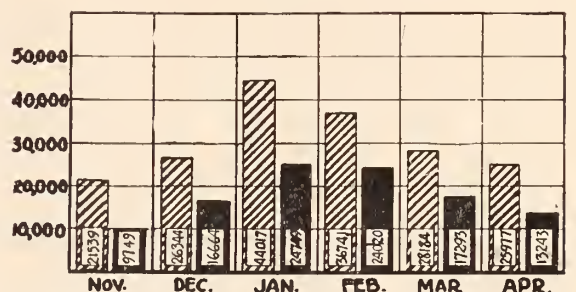
The major part of all the absences of children from school is due to preventable illness. This loss of time by children results in increased cost to the municipal educational system not only in providing unused educational facilities and the expense of educating retarded children, but in loss of revenue from state educational allotments based upon school attendance.

Ignoring for the moment the duty and importance of protecting children from disease and insanitary environment, financial considerations alone should lead the municipality to prevent these unnecessary expenditures and avoidable losses of revenue. To show that these avoidable financial burdens are heavy enough to demand immediate consideration by local boards of education, and to indicate a rational program of health supervision, health education, and disease control measures which would reduce the losses is the object of this brief statement.

Recently a study was made of the causes of absence among the school children of Trenton from November, 1924, to April, 1925. During this period a total of 182,803 days were lost from all causes by pupils in all grades of the public schools; of this number 105,718 days—or 58 per cent—were due to avoidable illnesses. Of the more than 100,000 days lost because of illness, 50 per cent were due to common colds and sore

SCHOOL CHILDREN'S ABSENCES DUE TO ILLNESS AND TO ALL CAUSES

(By Months from November, 1924, to April, 1925)



Key: Black—days lost due to illness. Barred—days lost due to all causes.
Total: All—182,803. Ill—105,718.

throat, 26 per cent to contagious diseases per se, and 24 per cent to miscellaneous conditions, such as toothache, headache, and indigestion. Except during November, the proportion of absences caused by disease to total absences showed little variation (as is indicated by the preceding graph).

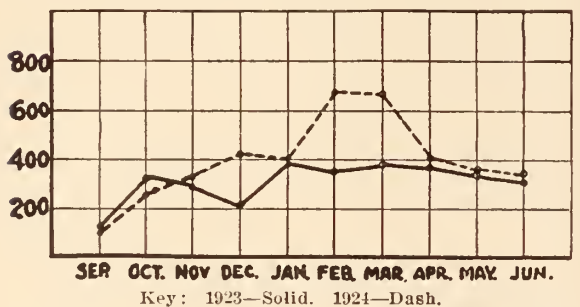
It is impossible to estimate the cost to the city of Trenton of providing educational accommodations for the school children absent on account of illness, but the loss in revenue is measurable. The municipality receives from state funds an allotment of about eight cents for each child in school each day. The loss of 105,711 school days resulted in a loss of revenue to the city of more than \$8,000. Effective school hygiene can prevent many avoidable illnesses among school chil-

*From Public Health News, State Department of Health, Trenton, N. J., Oct.-Nov., 1925.

dren, but there is needed as well a health service for school teachers to prevent avoidable illnesses among them. (The following graph shows the loss of time among the teachers of the Trenton public school system.)

TEACHERS' ABSENTEEISM DUE TO ILLNESS

(By Months for the School Years 1923-24 and 1924-25)



Key: 1923—Solid. 1924—Dash.

Year	Total Teachers	Total Absences
1923	626	3104
1924	649	3940

Ten days allowed without loss of pay.

During the first year of the study there was a staff of 626 teachers in the Trenton public schools who lost a total of 3,104 days, and during the second year there were 649 teachers who lost a total of 3,940 days. Although ten days absence with pay is allowed to each teacher, the avoidable loss to the municipality in the employment of substitutes should be sufficient reason for the establishment of a teachers' health service. It should not be forgotten that a teacher is absent from school only for a few days at the peak of her illness, but there is an intangible, but very real loss to the municipality in the efficiency of the teacher during the time the disease is developing and certainly for some weeks after the teacher returns to duty.

PREVENTING AVOIDABLE ILLNESS

In the prevention of avoidable illnesses there are two distinct services necessary: hygiene instruction, and disease control. The great number of illnesses recorded among the school children of Trenton indicates the need for: definite classroom teaching in regard to hygiene and contagion; knowledge of the methods of spread of common colds and communicable diseases, emphasizing the importance of contact; and daily records in each classroom of the causes of absenteeism, to be used as an index of health.

The control of cases of communicable diseases and the finding of foci of infection and carriers

of disease is distinctly a health administrative function in which there should be the closest and most effective cooperation between school medical officers and health officials for the control of these diseases is a responsibility placed by law upon the local board of health. The common communicable diseases—diphtheria, scarlet fever, chicken-pox, measles, whooping cough, and the like—are essentially diseases of school children spread largely throughout the school year. This fact is so generally appreciated that statistical proof would appear unnecessary, but a glance at the morbidity tables contained in the annual reports of the New Jersey State Department of Health will show that the majority of all cases of these diseases occur in the school age-group (from 6 to 16 years) and the great majority of cases occur during the months of school attendance.

The emphasis in preventive school health work should be placed upon the lower grades. A great amount of time, money, and effort would be conserved if ordinary interest were taken in the health of the children before the fourth grade, and the greatest returns may be expected from work confined to the enrollment and first grades.

The recently conducted enrollment clinics have established fully the importance of pre-school examinations and the correction of physical defects and errors in hygiene before the child enters school. The importance of calling these pre-school clinics "enrollment" is evident; the incentive stimulated by getting children ready for school ties up this neglected period with the child's first real job in life—going to school.

The importance of pre-school or enrollment clinics and corrective follow-up points logically to the value of preventive infant hygiene, and completes the chain of child health and training. The municipality which provides supervision and instruction of expectant mothers in order that the child may be well born; periodic medical inspection of infants and young children, with instruction of mothers in the hygiene of infancy; opportunities for the correction of physical defects; and training of the young school child in health habits, hygiene and avoidance of contagion, will rid itself of the heavy burden of training physically handicapped children. By these means it can prevent the economic waste of lost time due to avoidable illnesses, and can conserve greatly needed educational funds.

THE JOURNAL CLINIC

Morphological Changes in Fatigue*

BY T. H. BAST, M.D.

Department of Anatomy, University of Wisconsin

Few subjects in the field of medicine are so inadequately understood as functional disorders of the central nervous system. Two types of these disorders may be noted—one the result of actual pathology of some part of the central nervous system, the other due to improper metabolism within the system. Metabolic disorders are commonly regarded as fatigue, of which two kinds may be said to exist: (1) the fatigue of depression due to toxins acting on the central nervous system, and (2) fatigue of excitation due to over-activity within the neurons. In both cases normal functional activity of the central nervous system may be restored upon removal of the causes and the application of the natural therapeutic measures of rest and sleep. If, however, the fatigue has gone beyond a certain point, these measures are no longer effective and an irreversible malfunction of the central nervous system seems to be established. This study was undertaken in a very broad way in order to ascertain what the exact picture of fatigue or exhaustion of the central nervous system is under carefully controlled experimental conditions, especially to determine what morphological changes, if any, are to be found in the central nervous system, the ductless glands, or other organs of the body. It was undertaken in cooperation with the Department of Pharmacology under the direction of Dr. A. S. Loevenhart, the Department of Pathology under the direction of Dr. C. H. Bunting, and the Department of Physiological Chemistry under the direction of Dr. H. C. Bradley. It was hoped that the findings might lead to a possible suggestion for the development of suitable therapeutic measures to stave off the end results of fatigue and to restore normal function in an exhausted central nervous system.

The definite objects of the research, therefore, were: (1) to ascertain whether or not fatigue is

accompanied by morphological changes in the central nervous system, in the ductless glands, or in any other organs of the body; (2) in order to ascertain whether or not a symptomatic criterion might be established by which the exact status of the development of fatigue of central nervous system exhaustion may be determined; (3) to attempt to find therapeutic measures available for the restoration of central nervous exhaustion.

Many attempts have been made by previous workers to study morphological changes in fatigue. The contradictory statements made by these workers and the unsatisfactory methods employed by them made it desirable to initiate a complete new investigation. Physiological effects of the loss of sleep have been studied carefully by Lee and Kleitman, but these investigators confined their studies to human beings and therefore could make no investigation of morphological changes. The most outstanding workers on the effects of fatigue on the structural make-up of neurons has been done by Hodge, Dolley, Crile, Kocher, and Legendre. Nissl himself also made studies on this problem. Most of these workers confined their studies to fatigue obtained by physical exercise, electrical stimulation, or four or five days loss of sleep. The changes noted varied considerably.

For the purposes of this study, it seemed that loss of sleep seemed to be the most direct way of producing exhaustion of the central nervous system. The periods of induced sleeplessness used by former workers appeared to be too short. Due to the individual variation observed in animals, it was decided to carry the loss of sleep to complete exhaustion and death, if possible; to note what symptoms developed during the course of this induced sleeplessness, and immediately upon the death of the animal to fix the tissues of the central nervous system and other organs in order to rule out post mortem changes which may occur very rapidly, and to standardize as far as possible the technique employed.

*Abstract of paper presented before the regular meeting of the University of Wisconsin Medical Society, November 11, 1925.

Rabbits of a standard size were selected for study because of their ease in handling and general responsiveness to stimuli. These animals were placed in revolving cages 18 inches long and 18 inches in diameter, turned by a $\frac{1}{6}$ H. P. motor. The ends of the cylindrical cages were equipped with sliding doors and supplied with suitable racks for food and water. Fine meshed copper screens below the cages were used to permit the separate collection of urine and feces. These cages were run at a speed of 1.1 revolutions per minute which forced the animal to change its position about eight times per minute. The total distance traveled by the animal during 24 hours was 1.42 miles. In view of the normal habits of a rabbit, this small distance would seem to eliminate the factor of muscular fatigue as an element in our results.

Symptoms. Observations were made frequently during each day the animal was maintained in the cage. In order to accustom the rabbits to the cages, they were placed for a period of five days within the wire cylinders without revolutions taking place. The normal behavior of the animals could be noted during this period. When continuous revolution of the cages was started, the animals generally faced in the direction in which the cages turned. For the first few days, the animals would change their position by hopping; about the third or fourth day, various methods are tried to secure rest. Sliding is attempted but the irritation of the wire prevents this. Infections of the feet were guarded against by providing the animals with leather boots.

A total of thirty-five animals have been observed, of which nineteen died when not under observation or were discarded because of infection or other reasons. The results reported here are given, therefore, for sixteen animals which were considered satisfactory for our purposes. The general symptoms noted as fatigue increased were: (1) a gradual loss of weight, (2) an irritability followed by a general lassitude, (3) a gradual increase in the pulse rate with a sudden drop occurring close to the point of death, (4) a gradual decrease in the respiratory rate throughout the experiment, (5) no marked variations in temperature until near the end when a drop of as much as 10° C. might be noted, and (6) death in convulsions.

Careful examination by histological studies of

the cells of the central nervous system revealed marked changes in the Nissl bodies and in the neuroglia network. The Nissl bodies gradually diminished in size and in depth of coloring and many vacuoles appeared between them. This progressive chromolysis was accompanied by an apparent increase in the neuroglia cells. This condition was found to exist in the nervous tissue of the medulla and spinal cord. Somewhat similar changes have previously been described by Crile for the cells of the cerebral cortex. In the adrenals, increased vacuolation was noted in the medulla together with a disturbance in the usual regularity of the cells. There was further noted a deposition of colloid material in the medulla of the adrenal and the presence of large numbers of eosinophils in the sinuses of the adrenal medulla. The most marked change in the thyroid was a loss of mitochondria.

These findings indicate the severity of the structural changes which may take place as a result of prolonged sleeplessness. Further studies are in progress and it is hoped that the findings may indicate possible lines of therapeutic research designed to ward off the development of these structural and functional changes.

DISCUSSION

This interesting paper of Dr. Bast was discussed by Dr. Loewenhardt who spoke of Weir Mitchell's introduction of the rest cure for nervous exhaustion. He emphasized the importance of fatigue due to pain or loss of sleep in disease and the desirability of finding some therapeutic measure with which to treat impending or actual nervous breakdown. Dr. W. J. Meek spoke of the difficulties of obtaining such excellent pictures as Dr. Bast demonstrated and called attention to the fact that the changes noted might be the end picture of all moribund states whether induced by sleeplessness, starvation, or disease. The paper was also discussed by Dr. P. M. Dawson and Dr. P. F. Clark.

ACTION OF PITUITARY EXTRACT ON THE UTERUS.

The action of pituitary extract on the uterus, M. Pierce Rucker, Richmond, Va. (Journal A. M. A., Nov. 21, 1925), shows, is quite characteristic. It never gives contractions with periods of rest between, but always a continuous series of contractions with increase in intra-uterine pressure. This action was illustrated in a case of inevitable abortion in which labor was induced in the fourth month with a number 3 Voorhees bag. The patient was given one-fourth grain (0.0162 gm.) of morphine and $\frac{1}{150}$ grain of atrophin at 1:30 p. m. At 8 p. m. she was having painless contractions of the uterus that averaged 10 mm. of mercury at intervals of two minutes. She was given 5 minims (0.3 c.c.) of pituitary extract subcutaneously. Five minutes later, there was a characteristic pituitary extract action. The contractions increased in height only very slightly but were continuous one after another, without any period of rest. Twenty-two minutes elapsed before there was the slightest pause between contractions. The intra-uterine pressure was increased 6 mm. of mercury. The patient still felt no pain. In other words, here was a dose so small (considering the stage of pregnancy) that it caused no action clinically, and yet it produced an incomplete tetanus of the uterus.

Proceedings of the House of Delegates, Seventy-Ninth Annual Meeting, Milwaukee, Sept. 15-18, 1925

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12th District—HOYT E. DEARHOLT, Milwaukee.

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J. J. McGOVERN, Milwaukee.

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OSCAR LOTZ, Milwaukee.

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JOSEPH F. SMITH, Wausau.

HOYT E. DEARHOLT, Milwaukee.

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HORACE M. BROWN, Milwaukee.

ROCK SLEYSER, Wauwatosa.

JOSEPH F. SMITH, Wausau.

ALTERNATES

W. E. BANNEN, La Crosse.

F. GREGORY CONNELL, Oshkosh.

R. E. MITCHELL, Eau Claire.

COMMITTEE ON MEDICAL EDUCATION

L. F. JERMAIN, Milwaukee, *Chairman*.

EDWARD EVANS, La Crosse.

C. R. BARDEEN, Madison.

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THE COUNCIL.

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J. V. R. LYMAN, Eau Claire.

JOSEPH LETTENBERGER, Milwaukee.

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L. F. JERMAIN, Milwaukee.

DELEGATE TO COUNCIL ON HEALTH AND PUBLIC

INSTRUCTION, A. M. A.

G. WINDESHEIM, Kenosha.

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MR. J. G. CROWNHART, Milwaukee.

PROCEEDINGS OF THE HOUSE OF DELEGATES
HELD BY THE STATE MEDICAL SOCIETY

OF WISCONSIN, SEPTEMBER 15-17,
1925, HOTEL PFISTER, MIL-
WAUKEE, WISCONSIN
HOUSE OF DELEGATES

Tuesday Evening, September 15, 1925

The House of Delegates of the State Medical Society of Wisconsin was called to order in the Red Room of the Hotel Pfister, Milwaukee, Wisconsin, at seven-twenty-five o'clock by President Wilson Cunningham, of Platteville, Wis.

PRESIDENT CUNNINGHAM: Gentlemen, please come to order.

The first order of business is calling of the roll.

SECRETARY CROWNHART: Mr. President, we have taken the roll by registration at the desk outside, and I report a quorum present.

PRESIDENT CUNNINGHAM: There is considerable business to come before this body. It will probably be well for us to meet promptly at the different meetings to dispatch as rapidly as possible what business we have to perform. It will also be well for the different members to be present at the different meetings as they are representatives of their different societies, which are

in different parts of the state; therefore in order to represent the medical profession of the state in this House of Delegates it behooves you to be present at the different meetings.

The first order of business, I believe, is the report of the Committee on Public Policy and Legislation, Dr. O. B. Bock, Chairman.

REPORT OF THE COMMITTEE ON PUBLIC
POLICY AND LEGISLATION

To the Members of the 1925 House of Delegates:

The work of this committee during the past year has been so thoroughly digested in each issue of the Journal that your committee takes this opportunity to express itself as to our future policy rather than outlining our past success. A report of legislative action is made as an addenda to this report.

Our policy in lay educational endeavor, advanced two years ago, has proved its merit and we again affirm it here as the basis for our present recommendations:

"The organized profession of the state is not responsible for either the enactment or enforcement of public health measures. We express the opinion, however, that it is the duty of the organized profession of the state to point out to public and state officials and laymen at large the necessity for public health laws and their enforcement with the advantages to the general public welfare that accrue. The responsibility is wholly and entirely theirs. They must make the choice, but there can be no choice if the non-medical public is not informed as to the position of scientific medicine and what its work offers to the public well being. Such information should be made available to them."

FOR THE FUTURE

1. Education of the non-medical public in the field of scientific public health possibilities has two distinct approaches. The first, and by far the most important, is that which we may and can accomplish as individuals. We can not overemphasize the value of this work that was accomplished during the past year. Nor can we make our plea too emphatic that it be continued.

Like voting, we are too prone to see but the large total, forgetting that the total is but the sum of our individual actions. We, therefore, take this first opportunity to express appreciation to the membership as individuals for the splendid efforts they made. To such individual efforts do we, your committee, attribute the present gratifying results.

2. Our efforts as a group, based upon the same fundamentals, have contributed much. As a group we have been content to progress slowly that we might avoid the impossible and inconsistent positions into which we may so easily fall.

HYGEIA

We feel that our presentation of Hygeia to those in positions of responsibility has gone far to supply needed information. We believe this presentation list of about

225 should be enlarged to include those charged with the duty of enforcing public health laws as well as those who frame them. (Appropriation requested—\$500.)

ANNUAL LAY ISSUE

Two numbers of the Annual Lay Issue of our Wisconsin Medical Journal have been published. We feel this is a valuable adjunct to Hygeia in that it offers the opportunity to present more in detail, our special Wisconsin problems. With its circulation of 7,500 it also presents the opportunity to reach a much larger circle of interested laymen. We, therefore, urge its continuance. (Appropriation requested—\$1,000.)

SCIENTIFIC NEWS FOR THE PRESS

After careful study your committee now recommends a third step in our group lay educational endeavor. The step we propose will enlarge our field of lay educational work by reaching thousands rather than hundreds.

We recommend that this House authorize the establishment of a Wisconsin Scientific News Bureau to supply the daily and weekly press of this state with (1) news (2) respecting scientific medicine in all its fields (3) issued under the supervision of our Secretary and an advisory body to be selected by him and (4) to be under the immediate charge of a competent and experienced newspaper man.

To succeed we must build slowly and make every effort that each article issued is really of a news value; that each is accurate in every detail, and withall, that each presents its subject in a manner that will be understood by the non-medical readers. The article that savors of propaganda, no matter how truthful, will find no place in such a service as we propose.

We believe such a press bureau, established on the lines suggested, will meet with instant approval on the part of the non-medical press of the state and will be of very real educational service to their readers.

Your committee therefore recommends an appropriation of \$2,200 for the calendar year 1926. We believe that this contemplated service is constructive, that it is a natural progress in our educational service, and that its cost will never become excessive.

We are building for permanency. We now have our necessarily small circle of Hygeia presentations. We have the larger but still restricted circle of readers of the Lay Issue. We now ask this third advance that will extend the circle to the largest possible diameter.

Respectfully submitted,

O. B. BOCK, *Chairman.*

D. L. DAWSON.

J. J. MCGOVERN.

MR. J. G. CROWNHART,
Secretary Ex-Officio.

ADDENDA

The following is a brief record of how the 1925 Wisconsin Legislature disposed of measures relating to public health that were submitted to it.

1. Basic Science Bill Passed. The Legislature passed (Assembly 74 to 5; Senate 29-0) this bill which provides a basic examination and preliminary requirements of all who desire to practice any form of the healing art in this state. The measure is not retro-active. The bill was endorsed by this Society.

2. The Senate by votes of 23 to 6 and 21 to 5, twice refused eleventh hour amendments to recognize and exempt naprapaths.

3. A bill introduced by the Wisconsin Association of Optometrists provided in part that future physicians entering Wisconsin desiring to practice optometry must have two years education in an optometry school and pass an examination before the State Board of Optometry, was amended to strike out that requirement.

4. A bill to grant restricted licensure to chiropractors repealing the wide-open exemption clause of 1915 was passed. Licensure is subject to basic science requirements. The Assembly by a viva voci vote refused an amendment to give chiropractors the title "Doctor." The Senate refused a similar amendment 19 to 6. The Senate refused a second amendment to give chiropractors the title "Doctor" and to authorize chiropractors and naprapaths to attend cases of communicable and contagious disease.

5. Senate committee on State and Local Government refused recommendation to a bill that would restrict dispensing by physicians to dispensing in person, only to bona fide patients, and then only for the patients' immediate needs.

6. Senate, by a viva voci vote, amended a bill to limit ownership of drug stores to registered pharmacists, to include physicians.

7. Bill substituting single permit under state prohibition enforcement act for the several, passed (Assembly 63-3; Senate 24-0). Amendment to raise fee from \$10 to \$15 defeated in Assembly, 50 to 31.

8. Passed bill raising standards for practice of chiropody.

9. Refused to pass bill abolishing attorney for State Board of Medical Examiners.

10. Refused to change present law relating to non-disclosure of professional information in civil actions.

11. Refused to raise examining fee for physicians in insanity cases from \$4 to \$6.

12. Refused to pass bill providing for a medical jury of three to pass upon insanity appeals.

13. Passed bill that no corpse should be disposed of until ascertaining wishes of next of kin or person chargeable with funeral expenses.

14. Maintained and increased appropriations for State Board of Health.

15. Passed bill providing for sanitary districts in towns.

16. Refused to pass bill exempting private hospitals from taxation.

17. Refused to extend provisions of eugenics law to women.

18. Refused to authorize county health departments.

19. By veto, refused to increase state aid to county sanatoria.

20. By veto, refused to enact stringent sterilization law opposed by Board of Control.

SECRETARY CROWNHART: Mr. President, Dr. Bock asked me to inform the House that he is unavoidably absent this evening. He is not going to be absent for the entire session but he could not be here this evening. It is my suggestion, Mr. President, that the House authorize a reference committee to whom this report may be referred and that committee can bring its recommendations to the House.

DR. G. J. KAUMHEIMER (Milwaukee): I make a motion to that effect.

The motion was seconded by Dr. Windesheim, of Kenosha, and carried.

PRESIDENT CUNNINGHAM: I would like to appoint on that committee Dr. A. J. McDowell, Dr. A. J. Gates and Dr. J. C. Baird.

The next order of business will be the report of the Editorial Board, Dr. Lotz, Chairman. Dr. Lotz not being here, I will call on Dr. Dearholt.

DR. HOYT E. DEARHOLT (Milwaukee): Mr. Chairman and Gentlemen: I think that the Journal itself offers the best report that the Editorial Board can make to the House of Delegates on the progress of the Journal. I think perhaps in looking over this report that Dr. Lotz has handed in, that I would just like to say, the part referring to my service was written and printed without any knowledge on my part. Dr. Lotz has been handing me compliments. I want to say he has done a great deal of work during the past year on the glorious and laborious job of editing and passing upon the original articles that have been published. As I said, I believe that the Journal is one of the best state journals in the country and offers plenty of proof of that.

REPORT OF EDITORIAL BOARD

*To the Members of the House of Delegates,
State Medical Society of Wisconsin.*

The 1924 report of the Editorial Board closed with an appeal to the House of Delegates and to the members of the Society for suggestions and criticism, re: appearance, contents and make-up of your Journal. In spite of the fact that the response to this appeal has been a very meager one, I believe you will agree with me that the Journal is improving in general appearance, and especially in value and interest to the members, with every number.

To our modest Secretary and Managing Editor, Mr. J. G. Crownhart, must be given the bulk of the credit, for he is continually on the alert for increasing the value and attractiveness of the Journal. He has recently threatened to make the Journal indispensable to every physician of Wisconsin, and I dare say if he hasn't done so yet he will do so ere long.

Another factor that has contributed greatly to the improvement, is the splendid array of original articles sent in by the members and outsiders. While the selection of the right articles and the rejection of others, makes the work of the Editorial Board a bit more difficult, this is compensated for by the pride that we can

take in making our Journal better and better in every way and every day.

One department, and that a very important one, has not been supported by the members as we believe it should be. I refer to the Editorial column. Dr. Dearholt, of the Board, has had the responsibility of this department for some time and has been exceptionally gracious and free with his time and thought to make the column a very worth while and interesting one, but it is hardly fair to put the entire burden upon his shoulders.

I must acknowledge, however, the splendid co-operation extended by members of the Council during the past year.

Again please come across with suggestions and criticism, for the Editorial Board desires to make the Journal of the State Medical Society of Wisconsin, the best in the country. Respectfully submitted,

OSCAR LOTZ, *Chairman.*

PRESIDENT CUNNINGHAM: You have heard the report of the Editorial Board. This is also printed in the hand book. I will entertain a motion to adopt the report.

DR. J. M. DODD (Ashland): I move the report be accepted as printed.

The motion was seconded by Dr. Sandborn, of Appleton, and carried.

PRESIDENT CUNNINGHAM: The next order of business is the report of the Committee on Medical Defense by Dr. Patek.

I might say to Dr. Patek and the other chairmen of these committees that the reports are published in the hand book and it might be well for the chairman to go through the report and stress any points he would like to bring to the especial attention of the members of the house.

DR. A. J. PATEK (Milwaukee): Mr. Chairman, there is no formal report of this committee that has been made thus far. Therefore, no report has been published in the hand book. The report has been delayed and will be presented later because our attorney has been ill and has only been able to do part time work. When we get his complete data on the work he has done during the past year, the committee will report. We feel we can not issue a report until we get that data. We may say, however, that our record is clean. We have had no judgments in the past three or four years, I believe. I was off the committee a year or two and don't know what was done. In general, I do know we have had no failures in the cases that we have defended. We have had no suits brought in which judgments were entered against the defended doctors. That is perhaps all I need to say, because I think it tells the whole story.

As you all know, the subject of medical defense has not been accepted by all the members of the society. Mr. Crownhart tells me about sixty per cent of the members of the society have adopted the medical defense and are paying the fee for such, so that the amounts paid in do no more than cover the expense of the medical defense. It is a pity, I think, that the

membership cannot be enrolled one hundred per cent in our Society. However, there are forty per cent in various societies who still believe they do not care for medical defense and who are depending on other organizations.

With the consent of the Society, if you will accept this as a preliminary report, you will find a report issued as part of the proceedings later, and the bills can then be approved and paid by the treasurer.

PRESIDENT CUNNINGHAM: Gentlemen, you have heard the report of Dr. Patek. What is your pleasure?

DR. T. W. NUZUM (Janesville): I move it be accepted.

The motion was seconded by Dr. Bannen, of La Crosse, and carried.

DR. PATEK: Mr. President, may I speak just a moment in reference to the statement which I made in reference to the figures given me by Mr. Crownhart that only sixty per cent of the membership are availing themselves of medical defense? I wonder if it would seem at all consistent with the opinions of those present that some effort should be made, not for the sake of increasing the income because we don't need it for the income from the sixty per cent is enough to carry the expense and we still have something left, to enroll more than sixty per cent, at least a larger percentage of that missing forty per cent so that all, by some propaganda or other through our Editorial Board, would avail themselves of medical defense and also of the success that our state society defense has had throughout the ten or twelve years of its existence. It seems a pity that only sixty per cent of the members realize fully what it means to be defended by the state society.

PRESIDENT CUNNINGHAM: We will take no action on that. It is a matter for the individual members to consider and think over and decide if they think it advisable to take the state society's medical defense.

The next order of business will be the report of the Committee on Health and Public Instruction by Dr. Stovall, Chairman. Is Dr. Stovall present? (No response.) What is your pleasure in this matter, gentlemen? Will we have that report later or pass upon it as published in the hand book? I don't think that Dr. Stovall will have anything to add to what we have already published beginning on page 14.

REPORT OF COMMITTEE ON HEALTH AND PUBLIC INSTRUCTION

To the Members of the 1925 House of Delegates:

The Committee on Health and Public Instruction has this last year been carrying out the same sort of a program which has been reported to the society for the last two years.

The Committee's activity with the State Teachers' Association has continued. The Health Section for that organization has now been well organized. The program last year which was prepared by the chairman of your Committee together with the assistance of other members of the Committee was instructive, and well

attended. Dr. Gaenslen of Milwaukee and Dr. Dodson of Chicago both gave excellent talks. Dr. Gaenslen spoke on the relation of posture to general health, and Dr. Dodson on the activity of the American Medical Association in the promotion of public health. We expect that the program for this year will be equally as good.

During the year several public addresses in medical subjects have been made, and the Preventive Medicine Section of the State Journal has been continued. The burden of other work has interfered very largely in the proper conduct of this column, so that the work of keeping it going has shifted from the chairman of your Committee to the secretary of the Association. It is recommended, therefore, that the manner in which medical subjects pertaining to public health, are presented in the State Journal, be left entirely to the secretary of the Association and the Editorial Board.

For the year 1925, the last House of Delegates appropriated to this committee the sum of \$400. Of this amount \$100 was used to apply on the cost of mailing the Crusader to each member of the State Society during 1924. After this was paid the committee had left \$300. This sum was obviously too small to finance any sort of a lay educational campaign. It was also too small to carry out the idea outlined in our last report concerning the preparation of manuscripts on Public Health subjects to be supplied to members of County Societies.

Through the Wisconsin Anti-Tuberculosis Association it was possible to have the Crusader mailed to the office of each physician in the Society. We considered this the best means we had of getting health problems before a large number of lay people, and thought that at the same time we would be supplying to the office an interesting magazine for the physician himself. We, therefore, used our \$300 balance to apply on the cost of mailing the Crusader to each physician.

The committee recommends the continuation of this appropriation.

The chairman can now furnish County Societies with program material. This material will consist of data and general information on subjects which are to be brought up for discussion before the local societies. The larger idea on this subject which has been outlined in the last two reports of this committee has not yet been developed, due largely to the pressure of other affairs, and to some extent to the difficulty of getting the men in various specialties to prepare manuscripts and bibliographies.

Respectfully,

W. D. STOVALL,

Chairman.

DR. EDWARD EVANS (La Crosse): I move it be accepted as printed in the hand book.

The motion was seconded by Dr. Gates, of Tigerton, and carried.

PRESIDENT CUNNINGHAM: The next order of business is the report of the Committee on Medical Education. Dr. Bardeen. (No response.) Is Dr. Jermain present?

DR. L. F. JERMAIN (Milwaukee): There is nothing to add to the report which is printed in the hand book.

REPORT OF THE COMMITTEE ON MEDICAL EDUCATION

To the Members of the 1925 House of Delegates:

During the past twenty years earnest efforts have been made to improve medical education in this country. The primary object in this movement has been to improve the academic training of physicians in such a way as to enable them more adequately to meet the medical needs of the community than was possible under the old system in vogue when the reform commenced. The chief steps in the attempts at reform have been:

1. The passage of medical practice acts restricting the practice of medicine to those who meet certain educational requirements.

2. Increase in premedical educational requirements. In addition to a four year high school course at least two years of college work are now generally required and many schools now require three or more years of such training. The primary purpose of this is training in physics, chemistry, and biology; the establishment of a scientific attitude.

3. The organization of two years of training in the basal medical sciences under full time teachers, productive specialists in the sciences taught.

4. The organization of two years of clinical training in hospital wards and outpatient departments under the direction of specialists. In several schools the chief departments are manned by "full time" scientific specialists.

5. The encouragement of one or more years of service as an intern. Some schools make this a requirement for graduation and some states make it a requirement for licensure.

The immediate results of effecting these reforms have been:

1. A great increase of cost in time and money to the individual who desires to prepare for the practice of medicine. For no other profession are these requirements so great.

2. A great increase in the cost of establishing and maintaining a medical school. Large endowments or liberal support through public taxation or both are required to meet the present requirements. The number of medical schools and the number of students received in a given class in the school have become greatly reduced.

3. A relative increase in the number of practitioners of various cults for the practice of which the requirements are far less than for medicine.

4. A relative increase in the number of specialists practicing in the larger cities and relative decrease in the number of rural practitioners. It is a question as to how much this is due to a general change in social conditions and how much to changes in methods of medical education.

The ultimate results of the present methods of medical education cannot well be foretold until they have

been given a longer trial. It is, however, important that the results be thoroughly observed from the social standpoint. Every physician should be a student of social as well as of the physical sciences.

The most striking feature of the recent annual meetings of the Association of American Medical Colleges and of the Council on Medical Education of the American Medical Association was the large amount of attention given to the social aspects of medical education. The articles by Dr. William Allen Pusey, ex-president of the American Medical Association, who strongly believes that present methods of medical education should be modified to meet social needs, have done much to arouse interest along these lines.

At the instigation of the Association of American Medical Colleges, a Commission has been appointed to study medical education, to establish the character of the elements required for the preparation of physicians for the practice of medicine, and methods of avoiding over-standardization and loss of initiative. Dr. Willard C. Rappleye, a man exceptionally well qualified to study this subject in its social aspects, has been made chairman of this commission. The other members of the commission are:

Mr. A. Lawrence Lowell, President Harvard University.

Dr. Olin West, Secretary American Medical Association.

Dr. Ray Lyman Wilbur, Ex-President American Medical Association.

Mr. Samuel P. Capen, Chancellor University of Buffalo.

Dr. Edward J. Strickler, Colorado Board of Medical Examiners.

Dr. Waller L. Bierring, National Board of Medical Examiners.

Dr. Richard M. Pearce, General Education Board.

Dr. Harry G. Gale, Dean, Ogden Graduate School of Science, University of Chicago.

Dr. Hugh Cabot, Dean of the Medical School, University of Michigan.

Dr. David L. Edsall, Dean of Harvard Medical School.

Dr. William Darrach, Dean of College of Physicians and Surgeons, Columbia University.

The expenses of this Commission, the work of which is planned to extend over several years, are to be met in part by contributions from the colleges which are members of the Association and in part by contributions from other sources. The initial fund to be raised is \$140,000.

Our interest, as members of the State Medical Society, in medical education has special reference to meeting the needs of the state. Under the present national conditions in medical education it is essential for the state to be able through institutions within the state to maintain an adequate supply of well trained physicians in the state. The establishment of a complete medical course at the State University and the increasing endowments received by Marquette University should enable us to meet these needs. The third year of the medical course

at the State University will be given for the first time during the coming year, the fourth year the year following. A cordial spirit of co-operation exists between the two medical schools. Both schools desire the aid of the members of this society in the development of medical education in Wisconsin along lines which will be of greatest benefit to the state.

The passage of the basal science act is an important step toward protecting the public from the dangers of ignorant pretenders of the art of healing.

C. R. BARDEEN.
L. F. JERMAIN.
EDWARD EVANS.

DR. O. A. FIEDLER (Sheboygan): I move the adoption of the report.

The motion was seconded by Dr. Bannen, of La Crosse, and carried.

PRESIDENT CUNNINGHAM: Are there any corrections to be made to the report on necrology? If there are no corrections, this report will stand as published.

DR. W. H. BAYER (Merrill): Mr. Chairman, I see in the hand book Dr. C. C. Walsh's address is given as Wausau, it should be Merrill.

**REPORT OF THE COMMITTEE ON
NECROLOGY**

To the Members of the 1925 House of Delegates:

It becomes the duty of your committee to report that during the year ending September first, 1925, the following physicians of Wisconsin have died. The names of those who were members of this Society are printed in bold face type:

- Ashley, Thos. W..... River Falls
- Atkins, E. E..... Fond du Lac
- Baker, William F..... Wausau
- Berger, G. F..... Chicago, Ill.
- Bickford, Louis..... Oshkosh
- Brewer, C. S..... Waukesha
- Bronson, DeForest A..... North Fond du Lac
- Brown, Frank E..... Milwaukee
- Casey, Merle..... Fond du Lac
- Czibulka, A. C..... Plymouth
- Denham, J. F..... Boyceville
- Everett, Edward..... Madison
- Fenelon, C. D..... Phillips
- Gathmann, Henry..... Milwaukee
- Gibson, E. J..... Fort Atkinson
- Gieseler, Rudolph J..... Milwaukee
- Gilbert, Herman A..... Madison
- Greenberg, Harry..... Milwaukee
- Harrington, D. W..... Milwaukee
- Hefty, Paul Leo..... New Glarus
- Keech, J. Sothoron..... Racine
- Kings, John S..... Milwaukee
- Kinne, Edward..... Elkhorn
- Kreul, William C..... Milwaukee
- Lane, D. E..... Alhambra, Calif.
- Lochemes, Wm. T..... Milwaukee
- Loomis, Egbert E..... Janesville
- Mack, J. A..... Madison
- McCallister, G. H..... Avoca

- McGauley, F. M..... Fond du Lac
- Meyer, Edward..... Manitowoc
- Miller, D. C..... Marshfield
- Murphy, John C..... Brussels
- Nuzum, Walter F..... Madison
- Ochsner, Albert J..... Chicago, Ill.
- Pfeifer, Charles W..... Sheboygan Falls
- Pickett, S. L..... Bayfield
- Potter, L. A..... South Superior
- Riley, C. P..... Oxford
- Ripley, George H..... Kenosha
- Rood, James F..... Darien
- Rupp, L. G..... Sullivan
- Schmitz, Elsie R..... Green Forest, Ark.
- Schreiner, J. K..... La Crosse
- Seiler, G. A..... Monroe
- Sippy, Bertram W..... Chicago, Ill.
- Taylor, E. A..... Racine
- Townsend, Eugene H., Sr..... New Lisbon
- Ustick, C. M..... Milwaukee
- Van Hengel, G. T. J..... Waupun
- Voigt, A. H..... Oostburg
- Walsh, C. C..... Merrill
- Wellington, G. G..... Balsam Lake
- Wilson, C. J..... Winchester
- Wolf, Jacob..... Milwaukee
- Zaun, George F..... Milwaukee
- Zinns, Albert J..... Milwaukee

Respectfully submitted,

THE COUNCIL,

J. G. CROWNHART, *Secretary.*

PRESIDENT CUNNINGHAM: It will be so corrected.

The next order of business will be a report of the Committee on Hospitals. I will call upon Dr. L. F. Jermain, Chairman.

DR. L. F. JERMAIN (Milwaukee); Mr. Chairman, supplementary to the report, I will say that the St. Mary's Hospital of Green Bay has made application to be placed on the list of hospitals. The hospital has been inspected and the report has been sent to the Council on Medical Education but we have not had a return.

**REPORT OF ADVISORY COMMITTEE ON
HOSPITALS**

To the Members of the 1925 House of Delegates:

There are now 7,370 hospitals in the United States, having a total capacity of 813,926 beds.

In the State of Wisconsin there are 236 hospitals with a bed capacity of 22,941. Of these 90, with a bed capacity of 14,396 are hospitals maintained by Government Agencies; six are federal, 19 state, 52 county, 12 city and one city and county hospital.

Of the 146 non-governmental hospitals, 54 are denominational, 59 individual and partnership, and 33 are conducted by independent associations.

In Wisconsin there are 12 counties with 332 physicians and a population of 185,493 with no hospitals whatsoever.

Twenty-five Wisconsin hospitals have a total of 62

interns; 23 hospitals have a total of 68 resident physicians, and 40 hospitals have interns and resident physicians, or both.

During the year the following hospitals were placed on the approved list of general hospitals for the training of interns: The Evangelical Deaconess Hospital, Milwaukee; St. Elizabeth's Hospital, Appleton; St. Mary's Hospital, Superior; The Wisconsin General Hospital, Madison, and Marquette University Hospital, Milwaukee.

The Misericordia (Maternity) Hospital, Milwaukee, was approved for advanced training in maternity work.

Recommendations for approval for advanced training in children's diseases, and in contagious diseases, have been made for the Milwaukee Children's Hospital, and the Milwaukee Isolation Hospital respectively.

Respectfully submitted,

LOUIS F. JERMAIN, *Chairman.*

L. E. FAZEN.

J. V. R. LYMAN.

JOSEPH LETTENBERGER.

R. C. BUERKI.

PRESIDENT CUNNINGHAM: If there are no objections, this report will be adopted by the House.

The next is the report of the delegate to the Council on Medical Education by Dr. Jermain.

DR. JERMAIN: There is nothing to add to that report.

REPORT OF DELEGATE TO ANNUAL CONGRESS ON HOSPITALS, MEDICAL EDUCATION OF THE AMERICAN MEDICAL ASSOCIATION

To the Members of the 1925 House of Delegates:

The annual congress was held in Chicago on March 9, 10, 11, and 12th, 1925.

Twenty-five years of progress in medical education was discussed by Drs. John M. Dodson, Burton D. Meyers, C. M. Jackson, A. P. Matthews, Charles R. Bardeen, and C. C. Guthrie.

Much of the discussion centered about the questions of what should be included in the undergraduate curriculum; what should be omitted from the undergraduate curriculum, and how to provide general practitioners for the rural districts.

Co-ordination in medical education and correlation between the teaching of laboratory and clinical subjects were again freely discussed.

A paper by Dr. William Allen Pusey of Chicago, entitled, "The Principles Governing the Distribution of Physicians and Some Corollaries Thereof," led to much discussion.

In general much opposition to lowering of present requirements and standards of medical education was expressed. Country practitioners if anything should be as well qualified as those in the cities, and a double standard of qualification would be disastrous to scientific medical education.

Respectfully submitted,

LOUIS F. JERMAIN.

PRESIDENT CUNNINGHAM: The report will be accepted. The next report is by Dr. Patek as Chairman of the Committee on Goiter.

REPORT OF COMMITTEE OF ONE ON GOITER

To the Members of the 1925 House of Delegates:

As a Committee of One on the Goiter Problem representing the State Society, I wish to report that progress has been made. It may be well to remind the Society that prior to the action of the Council, a local committee had been appointed to carefully study the goiter problem from every angle, and to determine the most feasible way of combatting the situation in this community and state. This Committee was composed of physicians representing various interested bodies, and it was in order to identify the State Society as such with this movement that a Committee of but one was appointed as the Society's representative on that body.

The entire local committee has had several meetings, and has, through correspondence, been put into contact with a number of other interested agencies. It has considered methods of prophylaxis only, and has endeavored to ascertain not only feasible plans, but also the practicability of those in use elsewhere, and their applicability in our state.

Needless to say, the Committee realizes fully that, in advising the adoption of a method of medication for the combatting of the large goiter incidence here prevalent, it is assuming a great responsibility; this it does not take lightly. The Committee has been in consultation with a large commercial distributing house, and is now following out some analytical work in order to ascertain, first hand, the uniformity of the ingredients of various commercial salt products on the market. Until this is done, the Committee cannot formulate definite conclusions and hesitates to make recommendations. It is hoped that the work now under way will soon be complete. The results will be made the report of the entire Committee, and—if I may so suggest, could also be made the basis of my individual report to the State Society as the Committee of One.

I wish to acknowledge the Committee's indebtedness to Dr. C. A. Harper of the State Department of Health, and to Dr. J. P. Koehler, Health Commissioner of Milwaukee, for their cooperation and interest.

Respectfully submitted,

ARTHUR J. PATEK.

DR. A. J. PATEK (Milwaukee): Mr. Chairman, I am going to take a few minutes to amplify this printed report with some other data that I have. The fact that this was a Committee of One must not be taken by the members to mean the Society did not consider the subject matter of sufficient value to put it in the hands of a large committee. A large committee has been functioning which was very large and representative and responsible. One member of the State Society was appointed to represent the State Society on that committee so that the report that this committee intends to make later I feel should be incorporated, not only as the report of that committee at large, but also of the

one member who represents the State Society on the committee.

As noted in the hand book, you will see that the committee has had various meetings, that they have been in consultation with various responsible people, lay, medical and commercial, and that they have certain findings which they hope eventually to present to the society.

Our larger committee has not yet decided upon its recommendations, that is upon the recommendation to the State Society, or to the general lay body that first called it to our attention within the last year or two, or to the various societies of which its membership is representative. I would like to read some of the reports I have here, or some of the letters I have. I think it would be of value to you to read these, very briefly detailing the general impression that men in various parts of the country have had as to the value of iodine in salt for goiter and the method used.

A letter signed by Robert Olson, surgeon of the U. S. Public Health Service, who also conducted a survey in one of the larger eastern cities, in answer to criticism which came to him that Kimball or others have stated that the iodized salt was a dangerous thing and may produce toxicity in goiter, says: "I have no record of the aggravation of an existing goiter through the use of iodized salt, although it is well known that iodine in other combinations and large doses will cause a great deal of trouble. It is true that Kimball, of Cleveland, has reported three instances in which a skin rash developed in susceptible persons, but this is regarded by many authorities as insufficient to go against the vast amount of good to millions with goiter."

A recent communication from Dr. Gates is to the effect that he has at no instance and in none of his studies found cases in which the .02 of one per cent of iodine in salt has done damage. He recommends it whole heartedly.

There are some memoranda here that tell of the practice recommended in various states. For instance, the government reports, by Dr. Olson again, who has spent several years working for the government in goiter prevention, recommend iodized salt. Dr. Kimball in a public health report of April, 1923, outlines investigation made in Cleveland in cooperation with Dr. Marine. First examination showed fifty-six per cent of the girls had enlarged thyroid; second examination showed sixty per cent of the girls taking iodine had been relieved.

In Colorado they advised use of iodized table salt throughout the state. In Illinois tablets and iodized salt were recommended. In Indiana the use of iodine is recommended, but the form has not been specified. In Iowa the need of iodine was supplied; the use of iodized salt was recommended. In Kansas iodized salt was recommended. In Kentucky iodized salt was recommended. In Michigan iodized salt was recommended. In Minnesota no recommendation was made, but the value of iodine in daily food supply was covered. In Minneapolis iodized salt was recommended. In Montana iodine was recommended. These are all recommended by the health officers of the various states.

In Rochester, N. Y., they are putting iodine in the drinking water and they have tried it one year and are going to continue that practice. I don't like that idea, but they are doing it in Rochester. Iodized salt is recommended in Ohio, Cincinnati likewise. Oregon recommends the use of iodized salt; Utah, iodized salt; Virginia, iodized salt; Washington, iodine tablets; West Virginia, iodine tablets. In Wisconsin preventive treatment is suggested by local school doctors. Dr. Harper will probably have something to say on that. I know Dr. Harper has met with us and was very kind in helping us in gathering data. As a member of our committee, Dr. Harper will also join us in whatever recommendation we make.

PRESIDENT CUNNINGHAM: You have heard the report of Dr. Patek. Dr. Harper, have you anything to add?

DR. C. A. HARPER: Mr. President, I think Dr. Patek covered the ground very thoroughly. I don't know as I can add much to the information he has already given. I might say the Board of Health of Wisconsin has had under advisement the use of iodized salt. They realize that that is the easiest method of meeting the iodine deficiency in food. The Board of Health recommends the use of iodine practically through the advice of school physicians and the medical profession. It has sanctioned the use of iodine tablets, ten milligrams, once a month, as is used in some states. That has been pretty generally used in certain sections of the state. I believe, though, that it becomes a little monotonous for the school children to take one tablet a week during the school year. That is a reaction on that method of procedure.

The other method that we started out with primarily was the sodium iodide so that a patient or individual would get about fifteen grains in two or three weeks and that would be repeated. We are watching the other states and watching ourselves because if the iodized salt becomes firmly stabilized it undoubtedly will be the easiest method of administration. As Dr. Patek suggested, and as we have had samples sent to us, there has been a great variation in the amount of iodine in the salt put up by various salt companies. I think now that they are becoming more or less uniform, or at least they are attempting uniformity as to the amount of iodine in salt. I think that is all I have to say. I will be glad to do anything I can to help out the committee in correcting this food deficiency. We call it a food deficiency more than we do medication. When we say food deficiency, there are lots of children that take it, and when you say medication, certain families won't take it.

DR. A. J. McDOWELL (Soldiers Grove): Mr. President, I would like to ask Dr. Harper what advantage the iodized salt would have over placing the iodine in water.

DR. HARPER: When you put iodine in the water, only about one-half of one per cent of the water is used for domestic purposes and 199 parts of that iodine is wasted. It is a very expensive procedure. If it were not for the expense, probably that would be a very

satisfactory way, but it is by far too expensive. Then that method is applicable only to municipal water supplies and the individual in the rural district who gets his water from the well wouldn't iodize his water properly. So the expense practically is prohibitive.

PRESIDENT CUNNINGHAM: The report of this committee is before you, gentlemen. A motion for its adoption is in order.

DR. J. F. MAUERMANN (Monroe): Mr. President, I move its adoption.

The motion was seconded by Dr. Nuzum, of Janesville, and carried.

PRESIDENT CUNNINGHAM: I see Dr. Bardeen is now in the room. I will ask Dr. Bardeen for a report of the Committee on Medical Education.

DR. C. R. BARDEEN (Madison): Mr. President, the report has been printed. I don't know that it needs to be read. The main point in this report is that the medical education has been reformed and now people are beginning to doubt whether the reform was worth while. There has been a new committee appointed to study the question and see whether we are getting all that we should from this reform medical education. Of course, in the old days a man could get into a medical school pretty easily, and get through in two or three years and then he could go to work and learn how to practice medicine. Sometimes he would learn something in school, more often he learned more afterwards. Then the reform came about mainly by insisting on a great increase in the pre-medical requirements and in reforming the first half of the medical curriculum and putting the sciences in the hands of specialists. There was some reform also in clinical teaching. I think the general feeling is that medical education in our present procedure has been rather incomplete, it hasn't brought about all that it might; that the young men graduating after six or seven years of study after high school don't know as much medicine as they ought to, hence the uneasiness along these lines. At a tremendous expense of time and money the question as to whether it is really worth the cost is being re-studied. The Association of American Medical Colleges appointed a committee and is raising a fund, I think, of \$200,000 to re-study the whole question. That is the main thing at present. Of course, personally, I am very much interested in that, because in starting on our clinical teaching at the state University we want to take advantage of the mistakes that other people have made and try to avoid as many mistakes as we can and try, if we can, to improve this particular aspect of medical education which undoubtedly is not as fully reformed as it might be.

PRESIDENT CUNNINGHAM: Gentlemen, you have heard the report of Dr. Bardeen.

DR. G. J. KAUMHEIMER (Milwaukee): I move it be adopted.

The motion was seconded by Dr. J. C. Baird, of Eau Claire, and carried.

PRESIDENT CUNNINGHAM: The next order of business is the report of the Committee on Cancer by Dr. J. P. McMahon.

REPORT OF THE COMMITTEE ON CANCER

To the Members of the 1925 House of Delegates:

During the session of the State Medical Society of Wisconsin, for 1924, your Committee on Cancer pointed out the following facts:

That as a result of approximately eight years of effort on the part of your Committee, in co-operation with the American Society for the Control of Cancer, The Wisconsin State Board of Health, and The Milwaukee Health Department, it has come to pass that a definite percentage of patients suffering from symptoms suggesting cancer now present themselves for examination earlier than those of the same degrees of literacy had previously done.

That it has been noted that a definite percentage of the Medical profession have been taking a more active interest in the early diagnosis of cancer.

That in view of the above facts, the majority of your Committee believe that all the members of the medical profession should continue to put forth special efforts to acquaint themselves with the progress made from time to time, which enables the establishing of still earlier diagnosis of cancer and allied malignant diseases, and which assists in determining upon the most approved treatment for each individual case.

That the realization of these desiderata should ultimately tend to bring about a higher degree of uniformity in the professional advice given to sufferers and thus contribute to neutralize the present wide-spread opinion that little can be done to modify the clinical course of cancer.

That the response of the laity to the educational efforts, thus far put forth, has been such as to justify a continuance of the educational campaign. Indeed, this response has been such as to put the medical and sociological professions under obligation to continue this campaign until the most illiterate shall have some understanding of the early symptoms of cancer.

That the placing of a copy of the recently re-written "Essential Facts about Cancer—A Handbook for the Medical Profession," prepared by R. B. Greenough, Director Harvard Cancer Commission, James Ewing, Director of Cancer Research Memorial Hospital, New York, and J. M. Wainwright, Chairman, Cancer Commission, Pennsylvania State Medical Society, should be of material assistance in enabling the members of our profession to more readily and more efficiently discharge their duties to the cancer patients who consult them.

That inasmuch as it seemed advisable to discontinue for the time being the "State Wide Intensive Educational Campaigns on Cancer," it would be well to substitute, therefore, the forwarding of *Circulars* and *Leaflets* containing brief discussions of the cancer problem, and detailing the early suggestive symptoms of cancer in different parts of the body. These *Circulars* and *Leaflets* have been so compiled as to be easily understood by the members of the different professions such as the dental, the nursing, the pharmaceutical, the clerical, the sociological and pedagogical, etc., to the end that the members of these professions may be enabled to

more intelligently advise the people with whom they come into professional contact, and that their active and continued assistance may be enlisted in further educating the laity upon the importance of earlier diagnosis and earlier and more efficient treatment of cancer.

That among the circulars and leaflets available were:

"An Outline Discussion of the Cancer Problem for the Information of the Laity," as it appeared in the first annual Lay Issue of the Wisconsin Medical Journal.

"A Message of Hope," by Dr. W. W. Keen.

"Control of Cancer," by Dr. Frank Billings.

"Twenty Points About Cancer."

"Cancer Control—How the Nurse Can Help Towards Its Accomplishment."

"Destroy the Weed."

"Fighting to Win."

That different means of financing the undertaking above outlined to cost from \$500 to \$600 had been considered by the President and by your Chairman, but that no decision had been reached.

That the members of the Committee on Cancer, especially Edward Evans, Secretary Gray, and the Chairman, would appreciate such discussion on the part of the delegates present as would indicate the reaction of colleagues throughout the state towards the whole cancer problem, and more particularly towards the questions raised in the committee's report.

As the officers and delegates will recall, the committee's report for 1924 was referred to the newly created Reference Committee, it being the office of said Committee to act upon reports of the Secretary. Reports of Committees and Reports on New Resolutions to be submitted to the delegates. Of this Committee, Dr. Otto Fiedler, Sheboygan, was chairman, and said Committee subsequently presented to the House of Delegates the following resolutions:

"Resolved, by the State Medical Society in convention assembled that there shall be and there is hereby, appropriated from the general fund a sum of \$500 to be used by this committee in the purchase and distribution to every member of the Society the little hand book for the profession entitled "Essential Facts About Cancer;" and, be it further

"Resolved, that a sum not to exceed \$75 shall be, and is hereby, appropriated to this Committee for the purpose of securing and distributing pamphlets and literature to the following classes of the laity, viz., clergymen, dentists, nurses, welfare workers and teachers, which shall encourage them to earlier seek medical advice for conditions that might be malignant."

These resolutions were adopted.

Proceeding upon this authority, your committee ordered 5,000 reprints of the article entitled "An Outline Discussion of the Cancer Problem for the Information of the Laity," which appeared in the first annual lay issue of the Journal. Approximately 5000 of these reprints were placed in envelopes, every reprint being accompanied by a copy of three or more of the following pamphlets: "Twenty Points About Cancer," "Cancer

Control—How the Nurse Can Help Towards Its Accomplishment," "A Message of Hope," by Dr. W. W. Keen, "Control of Cancer," by Dr. Frank Billings, "Destroy the Weed," and "Fighting to Win." Seven hundred ninety-four envelopes containing copies of three or more of the above listed circulars and leaflets were enclosed in envelopes accompanied by "An Outline Discussion of the Cancer Problem for the Information of the Laity." All pamphlets, except the reprints, were furnished gratuitously by either the Wisconsin State Board of Health or the American Society for the Control of Cancer. Each envelope containing this literature bore the following stamp: "From the State Medical Society Committee for the Study and Control of Cancer. Dr. W. K. Gray, Sec., Wells Bldg., Milwaukee." This stamp was placed on the envelope in order to enable interested people to order additional copies.

In the hope of reaching those persons in each community who would be most interested in disseminating the information therein contained, these envelopes were addressed to: Dentists, Druggists, Clergymen of all denominations, Public Health Nurses, Visiting Nurses, Social Workers, Sociologists occupying positions in connection with social welfare departments of large manufacturing plants, School Teachers, Members of Parent-Teachers' Associations, Secretaries of Young Men's Christian Associations, Secretaries of Young Women's Christian Associations, and Salvation Army Leaders. When these packages had been addressed to the above mentioned classes, throughout eastern Wisconsin, but before steps had been taken to disseminate this literature among said classes throughout the remainder of the state, and just at a time when the Committee was about to order 2,000 copies of the "Hand-book for the Medical Profession," the Committee was informed by Secretary Crownhart, that the aggregate of the special appropriations approved by the House of Delegates during the session for 1924, exceeded available funds for that fiscal year. In consequence of this fact, the Council was for the time being, unable to take final action upon the recommendation that \$575.00 be placed at the disposal of the cancer committee.

Secretary Crownhart later informed said committee that the appropriation would be released in part or in whole when funds became available. Under these circumstances and pending the release of the additional funds appropriated, the committee has been withholding further efforts toward carrying out the program approved by the House of Delegates at the last annual session.

The expenses incurred to date, the money for which was either advanced or guaranteed by the chairman, are as follows:

Cannon Printing Co., 5,000 reprints.....	\$ 61.00
H. H. West Co., 6,000 Manilla envelopes.....	31.20
Postage	101.45
Telegrams to Am. Soc. for Control of Cancer,	
rubber stamp, draying circulars, etc.....	3.77
Total expenses to date.....	\$197.42

Your Committee improves this opportunity to reiter-

ate the belief that the cancer problem is the most important one confronting the medical and sociological professions today—that the “Essential Facts About Cancer, A Handbook for the Medical Profession,” should be placed in the hands of every practitioner in the state—that copies of the before mentioned circulars and leaflets should be mailed to the remainder of the representatives of the allied professions above enumerated residing in the state and—that some form of effort should be continuously put forth by the several County Medical Societies to acquaint all the laity with the early symptoms of cancer to the end, that we may, after the lapse of from five to ten years, duplicate with respect to the early diagnosis and treatment of cancer, the accomplishment which has been so brilliantly realized by those who have conducted the Anti-Tuberculosis Associations throughout the Country. We respectfully urge that at an early date, the difference between the \$575.00 appropriated a year ago, and the committee disbursements to date, totaling \$197.42 which difference amounts to \$377.58 be made available for the purpose for which it was originally intended.

Although this sum will not be sufficient to complete the work undertaken (the present cost of mailing 2,000 copies of “Essential Facts About Cancer—A Handbook for the Medical Profession” amounts to \$620.00) if it be made available some of us will, by some means or other, see that the full undertaking shall be completed.

Finally, we respectfully suggest that each County Medical Society appoint a special committee on cancer or delegate this educational work to some previously existing committee which will actively engage in the work to be done and carry it on to a successful conclusion.

Respectfully submitted,

J. P. McMAHON,

Chairman.

DR. J. P. McMAHON (Milwaukee): Mr. Chairman and Gentlemen: The report of the committee is, of course, in the hand book of the House of Delegates and there isn't anything to add to it, but inasmuch as we are somewhat involved, it may be well to verbally explain the situation. A year ago your committee went before you and asked that an appropriation of approximately \$600 be made to the Committee on Cancer for the purpose of distributing a hand book prepared for the medical profession by a committee of the National Association for Study and Prevention and Control of Cancer. It was also suggested that leaflets and pamphlets on the early suggestive symptoms of cancer be forwarded to social workers, nurses, teachers, clergymen, dentists, and so forth. The reference committee reported to the house favorably and recommended that a total of \$575 be placed at the disposal of the Committee on Cancer.

Proceeding upon the action taken by the reference committee and later ratified by the House of Delegates, we had envelopes addressed to about 5,000 of the members of the different professions just enumerated, and we were about to order the hand books for the medical profession. Then Mr. Crownhart informed us that owing to the generosity of the reference committees last

year, the income of the society was over-apportioned to the different committees that requested funds, that the money would probably be available later and that it would be available, as I understand, when and if the treasury will permit such a draft on it. We were in the situation of having addressed these envelopes to these social workers and nurses; we hadn't covered the whole state, we had covered the eastern half of the state. The envelopes were addressed and the enclosures made. There wasn't anything much to do but go ahead and forward them. That we did. The cost of doing what we undertook to do would be considerably more than the \$575. We knew that in advance. It was our expectation to get the additional funds required from some other source. We estimated at the time that the cost of furnishing the circulars to the nurses, social workers, dentists, clergymen, etc., would approximate \$400. In view, however, of the fact that the money was not released, we did nothing more than we had done when the information reached us that it wouldn't be available right away, except to purchase postage for the envelopes which had been made. There it cost us more than it would have if we had done it earlier, because the cent and a half rate went into force after they were inclosed.

Now we stand in the position today of having been promised \$575 to forward these circulars to the allied professions, of having used \$192 to accomplish that in about the eastern third of the state. We have done nothing toward purchasing the hand book for the medical profession. I believe that this is still one of the most important subjects before the medical profession. If I may take a few minutes to detail a history which came to my attention about a month ago, I think it will illustrate this need.

A woman in Milwaukee had had two competent physicians, two men who are considered competent in the community, two men who are successful practitioners, or successful in different things. They have a sociologic viewpoint. Still with it all a certain woman about forty years of age had been under their combined care for a period of nine months, complaining of intermittent flowing, excessive flowing, spotting, later an odor, a continuous discharge and pelvic pain. Neither of these physicians had suggested a vaginal examination. She finally consulted Dr. Jermain and was found to be the subject of a very advanced carcinoma.

Now that is a situation which is prevalent in quite a good part of the state to my personal knowledge. It is a situation which is not improving very rapidly. That similar situation probably does not take place today in diagnosis of incipient cases of tuberculosis. It will avail us little if we continue to educate the laity and not our own profession. If we don't do it, others are going to do it. Lay organizations are going to take it up as they did in a measure the tuberculosis subject. Unless the medical profession is brought up to a little higher standard with reference to this question of cancer, it isn't going to avail the patients very much to go to them, but it is going to reflect upon the medical profession and the members of it, because they

are going to continue going as they did in this case to other physicians and it is going to be embarrassing to members of the medical profession to have patients come in and tell them a lot about cancer that the doctors may not suspect they know, and tell them some things about cancer that the doctors really don't know themselves.

These are the hand books. The present cost of circulating these to the medical profession, because of the advance in postal rates, would be \$600. The cost of forwarding these leaflets, these little envelopes containing the leaflets to the laity throughout the balance of the state would probably cost \$500 more.

I believe, Mr. President, that it may be in order to have the delegates informed as to just what the present status is with reference to the balance of this appropriation, if it is possible for the Secretary to do so; I really don't know myself. Then we should have the reference committee—if we are to have one this year, as I understand we are—take up this subject again and see whether or not it is worth while to continue trying to do something with it.

The committee has not followed the instructions given it inasmuch as they have spent more money for one phase of the problem than they were authorized to do. That is of very little moment, because if the bill presented isn't O. K.'d by the Council, it has already been taken care of and will be taken care of and the work is going to go on. The question is whether it is going to go on through and by the medical profession or whether it is going to be taken up by an independent lay organization. So much for the explanation, Mr. President.

PRESIDENT CUNNINGHAM: I would like to add for the Chairman's information that the amount to cover this expense has been authorized by the Council.

DR. McMAHON: To cover the expense of \$192. Is the President or Secretary in a position to tell now whether or not the balance which was endorsed by the committee a year ago will be available within a reasonable length of time? You see so far as the State Medical Society is concerned we are in the position, after this bill has been allowed, of spending part of the funds to get certain information to a certain section of the state and the other section of the state, which is just as much entitled to it as the eastern part of the state, has not had any of this information. That isn't quite fair to the people in the western two-thirds of the state. Is it possible for us to have any information at this time as to when the rest of the \$575, which was appropriated a year ago, will be available or whether it will be available at all.

SECRETARY CROWNHART: Mr. President, for the information of the delegates especially, I want to make clear the point that while the House of Delegates appropriates, the Council has to make up a budget each year. As it just happened last year at Green Bay, the House of Delegates made total appropriations in excess of the income we were to receive. That was why the Council, as I understand it, held up certain appropriations, and approval of other expenditures, pending advice from the treasurer and secretary as to how the

budget was actually working out. The Council approved, in a meeting this afternoon, of the expenditures of the committee, which run to about \$200. They did not have time, Dr. McMahon, to take up the balance of the appropriation, and did not for the reason they understand the balance of \$300 will be insufficient to do any one of the two things that you have in mind doing. If I have their sentiment correctly, I think while that \$300 will be available during the fall months, they thought it would be best to have the new appropriation made from the House of Delegates and possibly have a report sent to the reference committee. Am I correct, Mr. President?

PRESIDENT CUNNINGHAM: You are correct.

Gentlemen, you have heard the report of the Chairman of the Committee on Cancer. What is your pleasure?

SECRETARY CROWNHART: Mr. President, may I suggest that be referred to the Resolutions Committee?

PRESIDENT CUNNINGHAM: I will entertain a motion to nominate a Resolutions Committee and have this matter referred to them, if that meets with your approval. There are a number of matters that will come up before the House of Delegates tonight and at future meetings, so it will probably be advisable to have a Resolutions Committee to take more careful action than we might do otherwise.

DR. ROCK SLEYSER (Wauwatosa): Mr. President, I move the appointment of the reference committee as suggested under order of business No. 19 in the proceedings.

The motion was seconded by Dr. Mauermann, of Monroe, and carried.

PRESIDENT CUNNINGHAM: As I understood it, then, a motion to refer the report of the Committee on Cancer to the Resolutions Committee, will be in order.

DR. O. A. FIEDLER (Sheboygan): I move you the report of the Committee on Cancer be referred to the reference Committee on Resolutions.

The motion was seconded by Dr. Kaumheimer, of Milwaukee, and carried.

PRESIDENT CUNNINGHAM: The next order of business is the report of delegates to the American Medical Association by Dr. Horace Brown.

REPORT OF THE DELEGATES OF THE STATE MEDICAL SOCIETY OF WISCONSIN TO THE AMERICAN MEDICAL ASSOCIATION

To the Members of the 1925 House of Delegates:

In past years, in writing the report of your representatives at the meeting of the House of Delegates of the American Medical Association, I have endeavored to call your attention solely to what may be called the "high spots" in the deliberations of that body, and have referred you and the members of the State Society to the reports of the activities of the governing body of the A. M. A. to be found in the official reports of the work of that body, as published in the Journal of the A. M. A., believing that by so doing I was referring you and the members of the State Society to the "source," con-

sidering with St. Jerome, that "the water of the river is purest at the source," and I am still of the same opinion that for a business-like presentation of the work done by the governing body of the A. M. A. there is no more suitable method of showing to the rank and file of the mass of the members of the medical profession throughout the country, the true picture of the business done by the Delegate-body at its meetings.

However, the cold presentation of the picture shows but a small part of the labors performed by that grouping of the representatives of the medical profession of the United States and its possessions.

It would be difficult to find anywhere a more earnest body of men gathered together for any purpose, than that composing the House of Delegates to the American Medical Association.

The business that is brought before the House is first considered by reference committees for the various kinds of motions, or the object of them, as they are presented to the House. These committees make report to the House after due and careful deliberation sometimes requiring days of examination and discussion. The resolution either approved or disapproved by the reference committee is then brought before the united body of Delegates, representing every state in the Union, the Army and Navy, the Public Health Service and the Colonies. If the report of the Reference Committee is approved, the resolution is adopted, if not approved, it is rejected.

Although from time to time an element of humor is injected into the House, most of the work is done with careful consideration and after long and earnest consideration of all of the factors involved in any motion referred to the House from the reference committees, and let no member of the profession think for a moment that the House of Delegates as a body, or its members as individuals, are not serious in their deliberations, or that they have in mind any object other than that of formulation of policies for the executive officers of the A. M. A., to carry out, which shall culminate in beneficial results for the entire profession throughout the United States and its colonies.

To accomplish this object is no small undertaking and in my years of service in the House, I have never yet been able to find any reason to believe that any other motive has been beneath the activities of any member or group of members.

Nor is the work of the House simple. The responsibility that rests upon the personnel of the House, seems to be recognized by every one of its members, and while it must be granted that mistakes are sometimes made in policy and conclusion, yet the outstanding motive of the membership, individually and as a whole, is that of acting in deliberation and conclusion, with broad views and high and unselfish motives for what seems, at the time, to be for the best interests of the profession of the United States, collectively and individually.

Again your representatives in the House of Delegates ask the members of the Wisconsin State Medical Society, to read the reports of the proceedings of the House of

Delegates of the American Medical Association with care and analytical consideration. They are to be found in Volume 84, Nos. 22 and 23, of the Journal, There will be found much of exceeding interest and importance to every member of the Medical Profession.

Your representatives especially recommend that complete reports be printed in the Hand-book for the Delegates and in the Wisconsin Medical Journal, of the action taken against the Veterans' Bureau, the War Veterans Act of 1924, the definitions recommended by the Judicial Council as to the meaning of the words "Sectarian" and "Physician." Also, we recommend that the Supplementary Report of the Judicial Council, presented by Dr. M. L. Harris, Chairman of that Council, be printed in full in the Journal.

Much will be found therein that is of the greatest importance to the welfare, professional and social, of every member of the medical profession, and the matter treated of should be placed before every practicing physician of the United States.

The State Medical Society of Wisconsin was represented at the meeting of the House of Delegates of the American Medical Association by the presence of its appointed delegates, namely, Dr. Rock Sleyster, Vice-Speaker of the House; Dr. Joseph F. Smith of Wausau and Dr. H. M. Brown of Milwaukee, all being present.

A very important resolution was introduced at the first meeting of the House, by Dr. Joseph Smith, of Wausau, Wis., which was referred to the Reference Committee on Miscellaneous Business, approved by that committee and adopted unanimously by the House. Dr. Smith's resolution follows:

WHEREAS, From time to time there are offered for sale to members of the medical profession and to hospitals many non-medical agents of alleged therapeutic value, consisting of electrical devices, mechanical contrivances, colored lights, various kinds of lamps, etc., the exact nature and action of which the individual members of the profession at large, because of the lack of the necessary technical skill, adequate facilities and instruments of precision, are not in a position to evaluate correctly; and

WHEREAS, The purchase of such pieces of apparatus, often on misrepresentation of persons offering them for sale, results in great financial loss to the members of the profession annually; and

WHEREAS, The use of such devices and apparatus without adequate understanding and control on the part of the physicians employing them tends to impair the physicians' alertness in making a diagnosis, thereby resulting in loss of time and money to patients; therefore, be it

RESOLVED, That the trustees of the American Medical Association be empowered to appoint a Council on "Non-medical Agents" similar to the Council on Pharmacy and Chemistry, consisting of at least two physicians, two physiologists, two pathologists and two clinicians, whose duty it shall be scientifically to investigate and report on the value and merits of all non-medical apparatus and contrivances offered for sale to physicians and hospitals, and to publish in THE JOURNAL from time to time the results of its investigations.

RESOLVED, That the matter be referred to the Board of Trustees with request for action.

Upon request of a number of other members of the House, the following resolution was introduced by Dr. Horace M. Brown and was adopted by an unanimous vote:

WHEREAS, Legislatures in several states have enacted legislation relative to the teaching of scientific theories and facts in their educational institutions, and

WHEREAS, Legal procedure is now in process in the state of Tennessee to determine the right of the legislative body thus to inhibit the dissemination of scientific knowledge, and

WHEREAS, a study of the development of mankind ethnologically, embryologically and anthropologically is fundamental to the proper comprehension of scientific medicine; therefore, be it

RESOLVED, By the House of Delegates of the American Medical Association, that any restrictions on the proper study of scientific fact and theory in regularly established scientific institutions be considered inimical to the progress of science and to the public welfare.

Respectfully submitted,

H. M. BROWN,

For the Delegates.

ADDENDA

Appropriate actions were taken to relieve the medical profession of the war time narcotic tax, a thing which is adding an unjust burden to the practice of medicine.

A movement was launched to get relief from the unjust discrimination of the Federal Income Tax such as the disallowance of traveling expenses to and from medical meetings and post-graduate expenses in computing Federal Income Taxes.

Action was taken against the administration of the Veterans' Bureau on the following counts:

1. Training of chiropractors. It was shown that 71 war veterans were in the process of manufacture into chiropractors at government expense. In as much as no vocational training shall be granted to any person after June 30, 1926, this waste of government funds will gradually diminish.

2. The World War Veterans' Act, 1924, section 201, paragraph 10, authorizes the director of the Veterans' Bureau "so far as he shall find the existing government facilities permit, to furnish hospitalization and necessary traveling expenses to veterans of any war, military occupation, or military expedition since 1897, not dishonorably discharged, without regard to the nature or origin of their disabilities: Provided, that preference to admission to any government hospital for hospitalization under the provisions of this subdivision shall be given to those veterans who are financially unable to pay for hospitalization and their necessary traveling expenses." This permits any World War Veteran, irrespective of financial position or social standing to obtain free medical care at Government expense, although the Government would not think of protecting the same people from hunger, cold or exposure. The Government has entered into competition with the medical profession, yet it has not entered into the subsidized competition with the grocer, the coal man, the dealer in men's furnishings and the landlord. The situation may almost be stigmatized as communistic medicine in its most militant form, endeavoring to edge its way into American life under the cloak of patriotism. Action will probably be taken in this matter at the next session.

The following definitions by the Judicial Council are of interest:

"A 'sectarian' as applied to medicine, is one who in his practice follows a dogma, tenet or principle based on the authority of its promulgator to the exclusion of demonstration and experience."

"A physician is one who has acquired a contemporary education in the fundamental and special sciences, comprehended in the general term 'medicine' used in its unrestricted sense, and who has received the degree of Doctor of Medicine from a medical school of recognized standing."

The following supplementary report of the Judicial Council seems to your delegates worthy of presentation in full to the House, and of publication in the State Medical Journal:

"Dr. M. L. Harris, Chairman, presented the following supplementary report of the Judicial Council:

"To the members of the House of Delegates of The American Medical Association:

"The medical profession is confronted today with one of the most important and serious problems that it has been called upon to meet. Briefly, and in business parlance, the question is: Shall the medical profession vend its products directly to the consumer or shall it sell them to a middleman or third party? This question comes to the attention of the Judicial Council by reason of the extensive propaganda that is being waged at the present time in regard to periodic health examinations. The American Medical Association has gone on record through this House of Delegates favoring periodic examinations, and this Council concurs in the desirability of such examinations being made. At the last meeting of the House of Delegates, however, the question now raised was not considered. Since then a number of commercial organizations have entered the field and, as middlemen, or jobbers, are offering to furnish periodic medical examinations to the public generally for a stated sum per annum and to send reports of the findings at the examination to the examined; and some of these organizations are giving advice to the examined as to what they should do for the conditions found. These examinations, of course, can be made only by physicians; hence, these companies are signing up contracts with physicians throughout the country to make examinations of all persons sent to them by the particular company holding the contract, and to forward the reports directly to the company.

THE INDEPENDENCE OF THE PHYSICIAN

"For these examinations, the company pays the physician a definite price and then sells the results of the examination to the individual examined at a much higher price. In other words, these companies acting as jobbers buy the physician's services at one price and sell them to the public at another. The questions that should receive the most serious and earnest consideration of this House of Delegates are: Should the physician deal with the jobber, or should he sell his services directly to the consumer? and, what is going to be the ultimate effect on the independence and the welfare of the physician as a result of thus dealing through a jobber, or middleman?

"When a physician signs a contract with a commercial organization to make physical examinations of all persons sent to him by the organization for a price set by the organization, and allows that organization to make its own charge to the individuals examined for the services rendered by the physician, the physician is selling his independence to the jobber. One of the largest jobbers in this line buys the services of the physician for \$5 and sells it to the individual for \$20 or \$25. It is the knowledge of the physician that gives value to the services, and this value is not enhanced or increased any by passing through the jobber's hands.

SOME FINANCIAL FIGURES

"One of the arguments advanced by institutions of the kind in question is that they are doing a great public service in their propaganda for periodic medical examinations, or as they sometimes call it, preclinical medicine, and that their work, therefore, is largely altruistic and philanthropic. We will not attempt to argue the question of the value of periodic physical examinations, as that is not in issue at this time; but some attention may be directed very profitably to the claims of altruism and philanthropy. One of the institutions already in the field, a stock corporation organized for profit, was capitalized for 200,000 preferred stock, and three shares of common stock were issued for each share of preferred. The preferred stock was increased to \$236,000 paid in, and recently a preferred stock dividend of \$90,000 was paid, but no common stock was issued with organized for profit, was capitalized for \$200,000 preferred stock, of which some \$326,000 is outstanding. The amount of common stock outstanding is \$689,100 or a total of \$1,015,100. During the year 1923 the earnings of this company were \$611,146.93, and the profits \$55,217.96. During the three months of November and December, 1923, and January,

1924, the operating profits were \$4,007.67, \$6,176.29 and \$6,932.91, respectively, each month showing a material increase over the previous month. At this rate the profits for the year would amount to approximately \$70,000, or 21 per cent on the preferred stock outstanding or 30 per cent on the actual money paid in. During the same three months the work done in the roentgen-ray laboratory alone amounted to \$35,881.20, which is at the rate of \$143,524 a year.

"It is said that two-thirds of the outstanding common stock has been trustee and that the dividends, if any, on this trustee common stock are to be applied to public health work. As no dividends have been paid on common stock, no public health work has been done by the trustees holding the trustee stock. In addition to the individual examinations made, this company has contracts with thirty-nine old line insurance companies to furnish them with reports on all examinations made of their policyholders. It also contracts with individual plants to make examinations of all of their employees. The company pays the physician only \$2.50 for examinations made of all policyholders in insurance companies with which it has contracts, and then sells the information which it receives from the physician to the insurance company for \$5. The examinations of employees of industrial plants are made by physicians sent directly from the home office of the company and not by the local physicians.

WHAT IS BEST FOR THE PUBLIC?

"In view of the fact that this company is a stock company organized for profit, that it has paid a large stock dividend, and that its earnings are now increasing annually, its claims to altruism and public benefaction are proper subjects for investigation and analysis. It is further claimed by this institution that the work which it is doing is of great value to the physician, at least to those physicians who have signed contracts to market their products through the company. In a recent letter from this company, it is stated: 'It must be conceded that we are giving a powerful impulse to the development of the general practitioner, not only in the matter of encouraging the people to consult him but in stimulating him to broaden his diagnostic work and adjust himself to this ever-increasing public demand for preclinical service.' There are several things stated in this sentence which deserve attention. It is stated that 'it must be conceded that we (the institution) are giving a powerful impulse to the development of the general practitioner.' Is it conceded by the profession that it was necessary for a commercial institution to enter the field of medicine to buy and sell the product of the physician's brains in order to stimulate the development of the physician? Is it conceded that making examinations for a commercial organization for \$5 each, which the company immediately sells to the examined for four times that amount, is a powerful impulse to the development of the physician's ability? Does it stimulate the diagnostic work of the physician to have that work bought by a jobber at one price and immediately resold to the consumer at a much higher price? Is there such a revolution taking place in the practice of medicine by its commercialization by stock companies, organized for profit, that it is necessary for the physician to readjust himself to the new order of things? If these things are true, it is certainly time for the profession to rouse itself from its slumber of inertia before it is shorn of its strength by the Delilah of commercialism. This is not a case of the good of the public versus the good of the profession. If it were, there would be no question at issue, for the profession always has and always will yield its own interests to that of the public good; but it is a case in which the public good can be best served only by what is best for the profession.

EIGHT THOUSAND EXAMINERS FOR ONE COMPANY

'One of these institutions claims to have 8,000 physicians on its list of examiners. That so many medical men have been induced to consent to give their services for a small

remuneration to a company to resell to the individual can be understood only by assuming that they failed to analyze the situation and to comprehend its significance. And this brings us to the question of what is going to be the effect on the independence and the welfare of the physician of thus dealing with a jobber. It should be remembered that all reports are sent directly to the home office, the examiner keeping no copy of them, and having no records of the cases examined. Furthermore, the examination made by the physician is not complete in that one of the most important elements of the examination is not made by him; namely, an examination of the urine. When the person to be examined receives notice to present himself to the physician for examination, he also receives a container with instructions to fill it with his urine and mail it at once directly to the home office. It might appear from this that the home office, while having confidence in the local physician's ability to make an examination of the blood, heart, lungs, eyes, nervous system, etc., thought him incompetent to make an ordinary examination of the urine. To us, however, it has a deeper significance. If there is one thing that the laity has been led to believe, it is the value of an occasional urinalysis. The home office, therefore, has the individual send a specimen of urine at stated intervals for reexamination. As these specimens do not pass through the hands of the local physician, the only place where the individual can obtain information concerning his condition is from the home office. The individual thus becomes, as it were, tied to the home office. It is evident that in time the home office and it alone will be in possession of full information of the physical condition of a very large number of individuals which will be of very great value to it. This is already shown by the fact that thirty-nine insurance companies have contracted to pay \$5 apiece for information concerning its policyholders. It requires no stretch of the imagination to see insurance companies obtaining in this way information concerning the physical condition of non-policyholders with a view to soliciting insurance without necessity of further medical examination. Corporations, business firms and others may likewise apply to the home office for information concerning the physical condition of employees, business associates, and others, and without going into further detail it is easy to see many ways in which the accumulated information may be of great pecuniary value to the home office, with corresponding loss to the medical profession.

THE INTEREST OF THE PATIENT AND THE ENCOURAGEMENT OF MEDICAL PROGRESS

"Individualism in the practice of medicine is essential to success if one has in mind the interest of the patient and the encouragement of medical progress; but we should distinguish very clearly between those things which are of purely individual concern and those which concern the welfare of the profession as a whole. In the one case, the problem may safely be left to each one to work out for himself; while, in the other, cooperation and collective effort are absolutely indispensable to self-preservation. The relation between the patient and the physician is an individual matter, and anything that disturbs this relationship is detrimental to the best interest of the patient. We cannot help but feel that the service of periodic health examinations, as conducted by commercial institutions, must inevitably result in the undermining of the confidence of the people in the ability of the practitioner. While these examinations are made by local physicians to whom the individuals are sent by the home office, it is made clear to them that it is necessary for the home office to complete the examinations by making the urinalyses, and, furthermore, it is impressed on them that the home office alone is competent to interpret the findings of the physician's making the examinations and to report to the examined. This is well shown by the fact that, in the blank which the individual himself is to fill out, space is left for the following: 'Any question you may wish to ask regarding your

health,' and again: 'Give address to which all reports are to be sent.' From the foregoing it is perfectly evident that the person examined is led to believe that the physician making the examination is not competent to answer any questions regarding his health, and that all communications on the subject should be addressed to the home office.

"While it is true that periodical health examinations are often of value and are to be recommended in a general way, we are inclined to regard the indiscriminate communication of the results of such examinations to the examined in the form of the statements that are commonly made by these organizations as unwise and often injurious to the individual who applies for examination.

"The communication of the results of physical examination and the general advice with which it should be associated, the preparation of a written statement if it be desired by the patient, these may be among the most delicate questions arising in the relations of physician and patient, questions on which the future happiness and usefulness of the patient may depend—vital problems in the art of medicine.

"These are problems with which only the individual physician can deal.

"No organization is medically qualified or, in our opinion, justified in issuing to individuals applying for examination a routine statement of the results of the examination.

WHAT WILL THE NEXT STEP BE?

"While the institution claims that it does not advise the patient as to treatment but refers him to his physician or to the examiner for any treatment which the home office may think necessary, it does advise as to diet, exercise and hygienic measures, which, however, are held not to constitute treatment. It is but a short step from what is now being done to what may be done in the way of treatment; and while it is denied that the institution intends to treat patients, we believe that it is not unfair to assume that the idea is not entirely foreign to the medical director of one of these institutions, for in a letter recently received from him he said: 'I am sure from my own knowledge of the situation that the public will not receive kindly any action on the part of the organized medical profession reflecting an indiscriminating condemnation of all efforts to render hygienic and medical service to the public aside from that rendered by the general practitioner.' It is not difficult to see in this statement a veiled threat directed against this organization, as well as a gentle hint that medical service in this connection can mean nothing but treatment of the sick. Institutions of the kind under discussion are almost certain to drift into treatments to certain patients who applied to them for laboratory examinations.

"We believe that enough has been said to show the importance of the subject, and feel that it is incumbent on this body to devise ways and means of setting the public aright on the question of periodic health examinations, and to convince the people that the proper person to make such examinations and to give advice relative thereto is the family physician, aided, when necessary, by local specialists."

(Signed): A. D. Dunn.
R. W. Fouts.

DR. HORACE M. BROWN (Milwaukee): Mr. President and Gentlemen of the House of Delegates: You have all seen the report as made in general in the hand book and many of you will possibly think that it is not sufficiently elaborated. If one should attempt to elaborate a report of what is done in the House of Delegates of the American Medical Association, it would require a large volume. If we epitomize the

work that has been done, in our report to the House of Delegates of the State Society, we have the appearance of being somewhat stingy with what is a perfectly free thing to give. When it is available to all of us to have possession of the Journal of the American Medical Association where the work of the House of Delegates of the American Medical Association is set forth completely, it seems to me it is rather absurd to make a long report in regard to what was done for the State Society itself, because that report as it appears in the Journal of the American Medical Association is available to anybody. You can see the whole story, and it is well worth any man's time, and well worth any man's effort, to satisfy his desire to know what is being done in the United States by the medical profession, by reading that report in toto.

One can only touch upon the high spots in a report in the hand book; one can only try in some way to assure the members of the medical profession of the United States that their representatives in the national body are seeking to do the best they can for the medical profession. I, at different times in my number of years, have been in the House of Delegates and have heard men say that the meeting of the House of Delegates of the American Medical Association didn't amount to very much. They don't know anything at all about it. They ought to be in that organization and be of the men who are put on committees and see how the work is done in those reference committees. Last year we had some matters brought before a committee of which I was a member, and on one item alone we called in twelve different advisers and we spent fifteen hours without getting anything to eat before we got out the report, because we made up our minds we couldn't afford to spare time to eat. Other committees do the same kind of work. We don't have a good time, we don't have a bully, jolly, good time when we go to the meetings of the American Medical Association and the House of Delegates. We are in session all afternoons except one, and then we are so busy on the committees we don't have time for play.

The report, as it appears in the hand book, I think, covers the very highest spots of the matter. Dr. Smith was a delegate from Wausau. He introduced a resolution which I think to be of the very greatest possible importance, and I am by no means sure but that it ought to be one of the functions of this Society to appoint some sort of a committee or supervising body to look into this matter of the vast number of mechanical appliances involving all the various phases of the use of electricity, heat and radiant energy and quartz light stuff and violet ray stuff and super-violet ray stuff and all that kind of thing, foisted on the mass of the profession by a lot of manufacturers of apparatus who themselves have no particular knowledge of the actual effect of the use of these things when applied to the patient, but who come and sell to the medical men all over this country these pieces of apparatus which in fact, most of them, are absolutely a waste. It would be a good plan if something were done in this state to try to protect the general practitioner from

being sold on those things. However, I have no motion to offer.

The report of the Delegates is before you for acceptance. The question of bringing up a new motion for the adoption of a similar resolution in the Wisconsin State Medical Society is a matter to come by a fresh motion with reference to a reference committee.

PRESIDENT CUNNINGHAM: Gentlemen, you have heard the report of the delegates to the American Medical Association.

DR. T. W. NUZUM (Janesville): I move it be accepted.

The motion was seconded by Dr. Bannen, of La Crosse, and carried.

PRESIDENT CUNNINGHAM: The next order of business is the report of the Chairman of the Council.

REPORT OF THE CHAIRMAN OF THE COUNCIL

To the Members of the 1925 House of Delegates:

There is so much of Society administrative details before your Council each year that a report reciting such material would accomplish no useful purpose. Instead, I call your attention to two actions by your Council during the present year that give promise of better Society organization.

1. Your Society, through the splendid efforts of our Treasurer, Dr. Rock Sleyster, is now operating upon a sound financial budget basis. At the January meeting a tentative budget was presented by Dr. Sleyster with an estimate of revenue to be received, the expenditures of the past year, appropriations authorized by the House of Delegates, and the Treasurer's recommendations.

With this compend of material clearly before us, your Councilors are in far better position to outline a well balanced program of activity for the year. This budget oasis is distinctly a step in advance for which the Treasurer is to be commended.

2. Alarmed by the growing violations of medical ethics, your Council in January authorized and selected a special committee on ethics to handle this particular problem. Our Secretary reports that in the six months since this Committee and policy has been announced, but four letters of inquiry have been necessary and that unethical newspaper publicity has dropped fully eighty per cent.

I believe this more than demonstrates that the organized medical profession can ably cope with its problems, no matter how difficult they may seem. As Chairman of your Council I feel that it should give increasing consideration to our major problems, from whatever source they may arise. While we may but seldom reach a solution in the first instance, we can at least work towards that end. I feel that such action, even though we may occasionally err, is far preferable to neglect. Neglect can only lead to the problems assuming proportions that make them increasingly difficult, if not impossible of solution.

In conclusion I beg to remind all our members that however organized other societies may be, the State

Medical Society of Wisconsin is now, and shall ever remain, a Society in which every member shall have a voice. To continue our progress your officers need your thoughtful criticisms and your constructive suggestions. Only in this way may they truly know the group opinion of the state, so necessary to real progress.

Respectfully submitted,

EDWARD EVANS,

Chairman of the Council.

DR. EDWARD EVANS (La Crosse): Mr. Chairman and Gentlemen: There are two or three matters to which I would like to draw your attention. In the first place, we are now operating on a budget. It was ably drawn up and adhered to by our Treasurer. I am sure it will please you to know we have now invested in safe securities, drawing interest, the sum of \$15,000. That is a pretty good thing for the old members to know; that we are not on a shoe string all the time as we used to be.

The second matter to which I want to draw your attention is that for the last few years at each annual Council meeting in January, and especially last year, we would have quite a portfolio of newspaper clippings from members of the medical profession that rather unethically liked to get before the public. Action was taken at our last meeting by the Ethics Committee, then appointed, to take cognizance of those matters, and since that time the portfolio has very much decreased and the committee of the Council taking care of that has had to write only four letters since that time. I am sure those who were the greatest offenders will never offend again, judging from the apologetic letters they have written.

Just one thing in conclusion I would like to draw your attention to, and that is that the Council feels that they are only your servants. They serve as officers for the State Medical Society and they can't do their work and the State Medical Society's work well unless every member throughout the state who is a member of the State Medical Society does his work well. I would like to say that the Council is at all times at your service in each district, and throughout the state, if you will only bring any criticisms you have to the attention of the Council. While we are officers—I am speaking for the rest of the Council as well as myself—I am sure we only want to be your servants.

PRESIDENT CUNNINGHAM: You have heard the report of Dr. Evans, Chairman of the Council. What is your pleasure?

DR. A. J. McDOWELL (Soldiers Grove): I move this report be accepted as printed.

The motion was seconded by Dr. Wright, of Antigo, and carried.

PRESIDENT CUNNINGHAM: The next order of business is the report of the Treasurer, Dr. Sleyster.

DR. ROCK SLEYSER (Wauwatosa): Mr. President, the detailed report of the receipts and disbursements is published in the hand book as well as a summary of the finances. This is as of July 31st, and is very complete,

REPORT OF THE TREASURER

To the Members of the 1925 House of Delegates:

RECEIPTS

	General Fund	Medical Defense Fund	Balance
1924			
Sept. 19—Dr. Sidney Hall.....	\$ 7,421.90	\$ 2,728.66	\$
Sept. 19—Dr. Sidney Hall.....	253.50	42.00	
Sept. 19—Interest on Treasury Certificates.....	249.36		
Sept. 22—J. G. Crownhart.....	23.38		
Oct. 1—J. G. Crownhart.....	108.75	8.00	
Oct. 17—J. G. Crownhart.....	15.18		
Nov. 3—J. G. Crownhart.....	170.25	14.00	
Nov. 17—J. G. Crownhart.....	81.78		
Nov. 17—J. G. Crownhart.....	471.22		
Nov. 25—J. G. Crownhart.....	16.64		
Dec. 1—J. G. Crownhart.....	221.25	58.00	
Dec. 3—J. G. Crownhart.....	19.50		
Dec. 31—J. G. Crownhart.....	53.25		
1925			
Jan. 5—J. G. Crownhart.....	618.00		
Jan. 9—J. G. Crownhart.....	612.00		
Jan. 13—J. G. Crownhart.....	1,095.00		
Jan. 31—J. G. Crownhart.....	4,087.00	568.00	
Feb. 21—J. G. Crownhart.....	2,238.00		
Feb. 21—J. G. Crownhart.....	75.00		
Mar. 30—J. G. Crownhart.....	291.00	238.00	
April 2—J. G. Crownhart.....	4,932.00	624.00	
April 14—Wisconsin Telephone Co. (Refund).....	3.50		
May 1—J. G. Crownhart.....	1,143.00	102.00	
May 1—J. G. Crownhart (Exhibit Space).....	282.50		
May 1—J. G. Crownhart (Hygeia).....	12.00		
June 1—J. G. Crownhart (Hygeia).....	3.00		
June 1—J. G. Crownhart (Exhibit Space).....	107.50		
June 1—J. G. Crownhart.....	864.00	112.00	
June 16—Interest on Treasury Certificates.....	249.39		
June 30—J. G. Crownhart.....	289.00	16.00	
July 31—J. G. Crownhart.....	882.50	58.00	
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	\$26,890.35	\$ 4,568.66	\$31,459.01

DISBURSEMENTS

1924	
Sept. 4—H. H. West & Co.....	2.75
Sept. 20—Cannon Printing Company.....	30.50
Sept. 20—Sickert & Baum Stationery Co.....	9.10
Sept. 20—Hunter Press Bureau.....	9.00
Sept. 20—Meyer News Service.....	4.50
Sept. 20—J. G. Crownhart, Salary.....	234.00
Sept. 20—Astrid Jurgens, Salary.....	85.00
Sept. 22—American Medical Association.....	12.00
Sept. 22—American Medical Association.....	12.00
Sept. 29—J. G. Crownhart, Petty Cash.....	300.00
Sept. 23—Com. on P. P. and L.....	50.00
Sept. 22—Certificates of Deposit Purchased.....	4,500.00
Oct. 1—American Medical Association.....	116.00
Oct. 1—J. G. Crownhart, Salary.....	234.00
Oct. 1—Astrid Jurgens, Salary.....	85.00
Oct. 1—J. G. Crownhart.....	96.89
Oct. 1—J. G. Crownhart.....	10.00

Oct. 17—Wm. C. Kreul Co.....	35.00
Oct. 17—Siekert & Baum Stationery Co.....	4.20
Oct. 17—Jack's Letter Service.....	6.00
Oct. 17—American Medical Association.....	32.61
Oct. 17—Massopust Sign Co.....	11.50
Oct. 17—Wisconsin Telephone Co.....	7.65
Oct. 17—Hunter Press Bureau.....	4.50
Nov. 3—Wisconsin Medical Journal.....	44.00
Nov. 3—J. G. Crownhart, Secretary.....	228.59
Nov. 3—J. G. Crownhart, Salary.....	234.00
Nov. 3—Astrid Jurgens, Salary.....	95.00
Nov. 3—Siekert & Baum Stationery Co.....	1.57
Nov. 3—Wisconsin Anti-Tuberculosis Association.....	90.00
Nov. 3—Jack's Letter Service.....	50.25
Nov. 3—American Medical Association.....	12.57
Nov. 3—Cannon Printing Company.....	129.50
Nov. 3—Hunter Press Bureau.....	4.50
Nov. 3—Fleck Furniture Service.....	5.00
Nov. 8—Hotel Pfister, Luncheon.....	18.00
Nov. 8—Wisconsin Telephone Company.....	10.09
Nov. 17—First Wisconsin National Bank, Check Books.....	5.50
Dec. 1—J. G. Crownhart.....	100.00
Dec. 1—J. G. Crownhart, Salary.....	234.00
Dec. 1—Astrid Jurgens, Salary.....	85.00
Dec. 1—J. G. Crownhart.....	125.67
Dec. 3—Cannon Printing Company.....	111.50
Dec. 3—Hunter Press Bureau.....	4.50
Dec. 3—L. C. Smith & Bro. Typewriter Company.....	1.14
Dec. 3—Siekert & Baum Stationery Company.....	1.40
Dec. 3—American Medical Association.....	1.25
Dec. 11—Wisconsin Telephone Company.....	13.06
Dec. 11—Cannon Printing Company.....	3.50
Dec. 11—Gimbel Brothers.....	1.25
Dec. 17—Astrid Jurgens, Salary.....	95.00
Dec. 17—Letalog Mailer Company.....	42.40
Dec. 17—American Medical Association.....	228.00
Dec. 22—Wisconsin Anti-Tuberculosis Association.....	84.65
Dec. 22—Cannon Printing Company.....	27.50
Dec. 22—Siekert & Baum Stationery Company.....	.83
Dec. 22—Hygeia.....	6.00
Dec. 22—F. M. Wylie.....	349.00
Dec. 31—J. G. Crownhart.....	142.00
Dec. 31—J. G. Crownhart.....	178.40
Dec. 31—J. G. Crownhart, Salary.....	234.00

1925

Jan. 9—Wisconsin Telephone Company.....	9.47
Jan. 9—Dr. O. B. Bock, Chairman.....	125.00
Jan. 9—Hunter Press Bureau.....	4.50
Jan. 9—Jack's Letter Service.....	10.50
Jan. 9—Cannon Printing Company.....	156.00
Jan. 9—Siekert & Baum Stationery Company.....	13.90
Jan. 10—Com. on P. P. and Legislation.....	1,000.00
Jan. 20—Jack's Letter Service.....	33.50
Jan. 28—Cannon Printing Company.....	80.50
Jan. 30—J. G. Crownhart, Secretary.....	1,274.00
Jan. 30—J. G. Crownhart, Secretary.....	287.58
Jan. 30—J. G. Crownhart, Salary.....	316.66
Jan. 31—Astrid Jurgens, Salary.....	95.00
Jan. 31—Wisconsin Anti-Tuberculosis Association.....	1.40
Jan. 31—Cannon Printing Company.....	5.50
Jan. 31—Hunter Press Bureau.....	4.50

Jan.	31—Gasser-Fox Agency.....	12.50
Feb.	11—Wisconsin Telephone Company.....	10.45
Feb.	11—Dr. Louis Jermain.....	10.00
Feb.	11—Dr. Edward Evans.....	20.20
Feb.	21—J. G. Crownhart.....	282.30
Feb.	21—J. G. Crownhart, Salary.....	316.66
Feb.	21—Astrid Jurgens, Salary.....	95.00
Feb.	21—Gimbel Brothers.....	3.30
Feb.	21—Cannon Printing Company.....	29.00
Mar.	27—Fred M. Wylie.....	500.00
Mar.	30—Wisconsin Medical Journal.....	560.00
April	3—Wisconsin Medical Journal.....	1,094.00
April	3—J. G. Crownhart, Salary.....	316.66
April	3—Astrid Jurgens, Salary.....	95.00
April	3—J. G. Crownhart.....	259.77
April	3—Wisconsin Anti-Tuberculosis Association.....	67.50
April	3—Cannon Printing Company.....	259.00
April	3—Hunter Press Bureau.....	4.50
April	3—Coe Brothers.....	25.00
April	3—Wisconsin Anti-Tuberculosis Association.....	400.00
April	3—Wisconsin Telephone Company.....	17.81
April	14—Cannon Printing Company.....	31.00
April	28—F. V. Cargill.....	1.50
May	1—J. G. Crownhart, Salary.....	316.66
May	1—Astrid Jurgens, Salary.....	95.00
May	1—J. G. Crownhart.....	186.52
May	1—Wisconsin Medical Journal.....	252.00
May	1—F. V. Cargill.....	4.50
May	1—Cannon Printing Company.....	43.68
May	1—Siekert & Baum Stationery Company.....	5.90
May	1—Cannon Printing Company.....	28.00
May	2—F. V. Cargill.....	1.50
May	2—Hunter Press Bureau.....	4.50
May	12—Dr. Louis Jermain.....	20.00
May	12—Wisconsin Telephone Company.....	8.61
May	19—Dr. Joseph Lettenberger.....	15.00
June	2—Wisconsin Medical Journal.....	192.00
June	2—J. G. Crownhart.....	186.87
June	2—J. G. Crownhart, Salary.....	316.66
June	2—Astrid Jurgens, Salary.....	95.00
June	2—Hunter Press Bureau.....	4.50
June	2—Dr. R. C. Buerki.....	34.60
June	12—Wisconsin Telephone Company.....	9.69
June	15—Dr. Joseph Smith, Expenses A. M. A. Meeting.....	71.28
June	15—Dr. Rock Sleyster, Expenses A. M. A. Meeting.....	97.77
June	15—Dr. D. L. Dawson.....	20.00
June	26—Dr. H. M. Brown.....	97.77
June	26—Cannon Printing Company.....	45.12
June	30—J. G. Crownhart.....	173.31
June	30—J. G. Crownhart, Salary.....	316.66
June	30—Astrid Jurgens, Salary.....	95.00
June	30—Wisconsin Anti-Tuberculosis Association.....	67.50
June	30—F. M. Wylie.....	140.69
June	30—J. G. Crownhart.....	66.00
July	6—Dr. Louis Jermain.....	10.00
July	6—Siekert & Baum Stationery Company.....	2.40
July	6—Hunter Press Bureau.....	4.50
July	6—L. C. Smith Typewriter Company.....	1.14
July	6—F. M. Wylie.....	500.00
July	6—Dr. O. B. Bock.....	250.00
July	6—Dr. C. W. Geyer.....	69.05

July 6—Wisconsin Telephone Company.....	14.49	
July 17—Cannon Printing Company.....	22.50	
July 17—Wisconsin Anti-Tuberculosis Association.....	16.65	
July 27—Dr. S. B. Ackley.....	1.75	
July 31—Postmaster, Milwaukee.....	60.00	
July 31—Wisconsin Anti-Tuberculosis Association.....	22.50	
July 31—Wisconsin Medical Journal.....	120.00	
July 31—J. G. Crownhart.....	232.15	
July 31—J. G. Crownhart, Salary.....	316.66	
July 31—Astrid Jurgens, Salary.....	95.00	
July 31—Wisconsin Telephone Company.....	13.80	21,484.86
Bank Balance, July 31, 1925.....		<u>\$ 9,974.15</u>

SUMMARY

September 19, 1924—August 1, 1925

GENERAL FUND

Total Receipts.....	\$26,890.35	
Total Disbursements.....	21,484.86	
Balance		\$ 5,405.49

MEDICAL DEFENSE FUND

Total Receipts.....	\$ 4,568.65	
Total Disbursements.....	None	
Balance		\$ 4,568.66*

TOTAL BALANCE, July 31, 1925..... \$ 9,974.15

*A statement to be received from counsel will leave a balance of \$1,117.63 in this fund.

LIST OF SECURITIES

1925

July 31—United States Certificate of Indebtedness No. 59678.....	\$ 1,000.00
United States Certificate of Indebtedness No. 60334.....	1,000.00
United States Certificate of Indebtedness No. 5.....	1,000.00
United States Certificate of Indebtedness No. 6.....	1,000.00
United States Certificate of Indebtedness No. 7.....	1,000.00
United States Certificate of Indebtedness No. 8.....	1,000.00
United States Certificate of Indebtedness No. 9.....	1,000.00
United States Certificate of Indebtedness No. 19052.....	500.00
United States Certificate of Indebtedness No. 79524.....	1,000.00
United States Certificate of Indebtedness No. 25138.....	500.00
United States Certificate of Indebtedness No. 57459.....	1,000.00
United States Certificate of Indebtedness No. 25448.....	500.00
United States Certificates of Indebtedness, Total.....	<u>\$10,500.00</u>
Certificates of Deposit, First Wisconsin National Bank of Milwaukee, purchased Sept. 29, 1924	4,500.00
TOTAL SECURITIES in the hands of the Treasurer	<u>\$15,000.00</u>

SUMMARY OF FINANCES

As of July 31, 1925

General Fund.....	\$ 5,405.49
Medical Defense Fund.....	4,568.66
Total Securities in hands of Treasurer.....	15,000.00
Petty Cash Fund in hands of Secretary.....	300.00
Accrued Interest on U. S. Certificates of Indebtedness.....	145.46
Accrued Interest on Certificates of Deposit.....	112.50
TOTAL FINANCES.....	<u>\$25,532.11</u>

Respectfully submitted,

ROCK SLEYSER,

Treasurer.

Bank balance as per Treasurer's Report July 31, 1925.....		\$ 9,974.15
RECEIPTS:		
Deposited September 1st.....		353.25
		<hr/>
		\$10,327.40
DISBURSEMENTS:		
1925		
Aug. 25—Dr. J. M. Dodd.....	\$ 30.00	
Aug. 25—Astrid Jurgens.....	95.00	
Sept. 1—Wisconsin Medical Journal.....	54.00	
Sept. 1—J. G. Crownhart Secretary.....	146.56	
Sept. 1—J. G. Crownhart.....	316.66	
Sept. 1—Cannon Printing Company.....	34.44	
Sept. 3—Wisconsin Telephone Company.....	10.67	
Sept. 3—Kresge Five & Ten Cent Store.....	13.30	
Sept. 3—Kowalsky Hardware Company.....	65.90	
Sept. 3—Engeln Electric Company.....	7.50	
Sept. 14—Milwaukee Auditorium Board.....	260.00	
Sept. 14—Cannon Printing Company.....	241.00	
Sept. 14—Julius Huebner.....	24.30	
Sept. 14—J. H. May.....	25.00	
Sept. 14—Whitehead & Hoag Company.....	164.00	1,488.33
		<hr/>
Bank Balance September 15, 1925.....		8,839.07
		<hr/>
Bank Balance as of September 15, 1925:		
General Fund.....	\$4,256.41	
Medical Defense Fund.....	4,582.66	
		<hr/>
		\$8,839.07

During the year I have been Treasurer we have received no bill from our attorney for medical defense, so the amount in the medical defense fund of \$4,582.66 represents a year's receipts with no expenditures. We thought best to find out what our indebtedness was and asked the attorney to render a bill. We find we are indebted to the extent of \$3,451.03, which will leave a balance when these bills are paid of \$1,117.63 in the medical defense fund. This, of course, will have to cover the cost of defending any members who get into trouble between now and the first of January, 1926.

PRESIDENT CUNNINGHAM: Gentlemen, you have heard the report of the Treasurer.

DR. J. F. MAUERMANN (Monroe): Mr. President, I move the adoption of the report.

The motion was seconded by Dr. Kaumheimer, of Milwaukee, and carried.

PRESIDENT CUNNINGHAM: The Treasurer's report, I think, is audited at the end of the year by a public accountant and it is not necessary to appoint a special committee on it as we have done in former years.

The next order of business is the report of the Executive Secretary, Mr. J. G. Crownhart.

SECRETARY CROWNHART: Mr. President, before I start, if I may be permitted, I would like to make one or two announcements. I suggest before the House of Delegates adjourns this evening that the Chairmen of all committees make announcement of a short committee meeting in different sections of the room, and that the

Committee on Nominations meet in the room next door so they can make arrangements as to when they desire the regular committee meeting.

The programs for the scientific sessions and your badges will be in the registration booth, booth 11 in Kilbourn Hall, which is just opposite the hall in which all the scientific sessions will be held. We hope that you will all register and secure your program, which is unusually long, prior to the first session which starts at nine o'clock tomorrow morning.

May I also call your attention, Mr. President, to the fact that we have as our first guest and speaker tomorrow morning Professor M. F. Guyer, of the University of Wisconsin, who is the Secretary of Wisconsin's Basic Science Board.

We passed out slips prior to the sessions for all delegates to sign. If there are any delegates that have come in since, who have not signed a slip, will they kindly sign one before they leave the hall so we may have a complete record of attendance. That applies to alternates and Councilors as well. When we publish attendance in the Journal we do not want to omit anybody's name who was present.

Mr. President, the Constitution provides that the House of Delegates shall select its own place and time for subsequent meetings after the first meeting. Because of the difficulty in selecting times and because of the facts that the delegates generally have to be notified a little ahead of time and there are some who do not come

to the first session, your Secretary has made the suggestion in the hand book that the second meeting of the House of Delegates be held at seven P. M. in this room tomorrow evening. The session may then adjourn at eight or very shortly thereafter and go into the Fern Room, just adjoining, where the smoker will be held. This coincides exactly with the arrangements made at Green Bay.

The Constitution provides that the third session shall be held on Thursday morning and the time set is eight-fifteen in the rest room of the Auditorium. We will need the approval of the House when your Secretary finishes his report, Mr. President, of the seven o'clock engagement for tomorrow evening, if that meets with your approval.

REPORT OF THE SECRETARY-MANAGING EDITOR

To the Members of the 1925 House of Delegates:

The work of your full time executive officer divides itself very naturally into several fields. So that this report may be concise, each field of work is taken up separately.

MEMBERSHIP

The total membership of the Society as of September first, 1925, is 1908, with 72 in arrears. This surpasses all previous records taken at a similar time by over . . . members. It seems clearly to indicate that the total membership for the calendar year will again set a record and may go over the 2,000 mark for the first time in the history of the Society. A tabulated report of membership by counties and districts will be found as an addenda to this report.

To the end that each reputable physician in this state may have the opportunity of becoming a member of his county society and thus of the State Society and of the American Medical Association, your Secretary now writes a personal letter to every physician upon his receiving his Wisconsin license. Such letters suggest that if desired, the Secretary will see that he has an invitation to be a guest at the next meeting of his county society, and in general offers the services of the State Society in any way they may be helpful.

While there has been no campaign for membership, the aims of the Society need and merit the support of every reputable physician in this state. It is only in this way that we may jointly transform our aims into accomplishments. Your Secretary takes this opportunity to express, in behalf of the officers of the Society, sincere appreciation of the work of the officers of the county societies who give so liberally of their time that our membership may continue to increase and their respective societies may progress.

THE JOURNAL

Two definite aims motivate the editorial and managerial policies of your Wisconsin Medical Journal. First, the Journal is the one constant evidence of a valued membership in this Society. Accordingly every effort is made that it shall bear profits to the individual members; not in revenue to the Society. Second, as a

state journal we endeavor to make it representative of the thought and progress in this state. Original articles submitted by our own members will receive major consideration.

In a purely financial way your Journal has also progressed. While it might be possible to reduce the amount received from the Society fund for the purposes of the Journal, after careful consideration the Board has determined to continue on the present basis during 1926. As result the Journal will be enlarged to include at least one new department and an additional number of original articles will be accepted and published. The Board will welcome constructive criticism that our Journal may take precedence instead of rank.

SERVICE TO THE MEMBERS

1. An outstanding service to the membership during the past year is the legislative enactment of the "single permit bill" effective January first next. This legislative action destroys a dangerous and unjust precedent. It restores to the profession the principle of paying an administrative fee rather than a type of purely class taxation. Your Secretary is glad to report that this bill was passed solely upon its merits and in its passage the vote of no member of the legislature was solicited on any other basis than the facts of the case. For the passage of this bill the Society is particularly indebted to Mr. Herman Satchjen, Madison, state prohibition commissioner and speaker of the assembly, and to Mr. George Meggers, member of the assembly from Waupaca county. It may be interesting to note in passing that the amount saved physicians of this state will vary from \$3,500 to upwards of \$5,000 annually.

2. The amount of service rendered in an individual way has increased very materially during the year. Members ask questions as to where they may obtain certain published material; where they may refer certain types of patients; how they may obtain action upon long pending requests from governmental bureaus, and similar questions even including the setting forth unusual cases and requesting aid in suggesting possible causes and treatment. All have been answered. If the information is not in the office it is obtained. So long as the questions pertain in some way to problems effecting the practice of medicine, any reasonable cost of securing results is not considered for the reason that information thus obtained for the one is generally of benefit to all.

3. Reports from the Medical Library of the University of Wisconsin and from the Package Library Department of the Extension Division clearly indicate members are using this service, established by the Society, in increasing numbers. As it continues, it grows in value.

4. Throughout the year your Secretary has made every effort to cooperate in the larger fields of service to the members suggested and fostered by the American Medical Association. At the present time state wide efforts are being made to secure the repeal of the war time "nuisance tax" on the federal narcotic permit and to secure a legitimate offset of expenses in attending post-graduate courses and scientific meetings against

income tax returns. Such efforts will be continued until successful.

5. Continued attention has been given to other fields of service in which developments will come from time to time only after extended investigation and work.

LEGISLATIVE-LAY EDUCATION

For six months during the past year your Secretary was the constant representative of the Society at the Wisconsin Legislature. He was not there to "influence" votes upon any subject. On the contrary, he was your representative in affording the members with such information as they desired and as was essential that they might give adequate consideration to measures dealing with the general field of public health and scientific medicine.

Your Secretary commends to the attention of every member the report of your Committee on Public Policy and Legislation and endorses each and all of its proposals.

At the Atlantic City session of the American Medical Association, President-Elect William D. Haggard declared, "We should never stop in the endeavor to get a fundamentally sound law to require the same examination in the elementary branches of physics, chemistry, anatomy, physiology, pathology and diagnosis that should be required of every one who undertakes to treat the sick."

Wisconsin can now respond that we have such a law. Its final accomplishment stands out as a major accomplishment of a field of endeavor in which this Society must continue to assume its responsibility—the field of affording information in the interest of public health.

LAY EDUCATION

During the past year we have published the Second Annual Lay Issue of our Wisconsin Medical Journal. Upwards of 7,500 copies of this issue were sent to public and semi-public officials in every section of the state; to many school libraries; to officers of civic clubs and in general, to prominent and interested men and women. Our Annual Lay Issue entails long preparation and careful editing but when so prepared it is a most valuable medium to make the public conscious, not only of the work of scientific medicine, but particularly of those problems which are peculiar or pressing in Wisconsin.

The Society has continued the presentation of Hygeia to about 300 members of the legislature, state officials, certain libraries and to laymen who are particularly interested in the problems of public health. In each case the subscriptions or renewals are accompanied by a personal letter setting forth the reasons for the subscription and the aims of the Society. In presenting these subscriptions the Society is accomplishing a public service, the results of which are already evident.

A limited number of newspaper stories have been released during the year and some addresses to non-medical organizations have been made. The Society also cooperated with the State Board of Health to present an address on Public Health by Dr. W. A. Evans of Chicago to the Wisconsin Legislature.

In addition to this, upwards of 1,000 copies of the

splendid article on medical licensure by Mr. Harry Eugene Kelly of Chicago were distributed throughout the state. Again each was accompanied by a personal letter.

The recommendations for continuance of this work will be found in the report of the Committee on Public Policy and Legislation. The recommendations of that committee are heartily endorsed by your Secretary.

CONSTITUENT SOCIETIES

Upon the strength of our county and district societies depends the strength of the State Society. County societies that are functioning to the benefit of their members are the first essential in successful medical organization.

Your Secretary is able to report that, to the best of his knowledge, there is now no society in this state which is a "paper" organization. Many of the societies are operating under tremendous handicaps and increasing efforts are being made to be of every possible assistance to such societies.

During the past year the Secretary has visited physicians in practically all of the 71 counties of the state. In addition he has visited in meeting the following county societies: Brown-Kewaunee, Dane, Grant, Green, Jefferson, Kenosha, Lincoln, Milwaukee, Oconto, Oneida-Forest-Vilas and Walworth. He has also visited the following Councilor District Societies: Second, Fourth, Seventh, Ninth and Tenth.

With the organization of Councilor District Societies in the Fourth and Seventh Districts we now have district societies in all except the following: First, Third, Fifth and Eleventh. Because of the large territory included in the Eleventh District, no district organization seems possible at this time. In the other districts organization will undoubtedly soon be effected.

This subject may not be concluded without mention of the fact that throughout the year members of the Council have, without exception, given most generously of their time that the organization of the county societies in the respective districts might be materially advanced. One councilor, Dr. John M. Dodd of Ashland, recently drove 300 miles that he might attend a county society meeting in his district. With such efforts as this on the part of the officers, medical organization in Wisconsin cannot fail to progress.

FINANCES

In two previous reports your Secretary suggested that dues might be decreased if desired. In each instance the suggestion was rejected. On the basis of our present activities and those outlined for the future, the Secretary feels that the income represented by the present dues may be judiciously applied. It is suggested, therefore, that so long as the present activities of your Society meet with the approval of the membership no reduction in dues be made.

It will be noted from the report of the Treasurer, Dr. Rock Sleyster, that the previous surplus of \$15,000 remains intact. It is believed that from \$1,500 to \$2,000 will be added to the reserve at the end of the present calendar year. This represents no special effort to build a large surplus; rather a natural growth.

Through the efforts of the Treasurer, the Society's income is now dispersed on a budget basis which permits the Council carefully to plan each year's major activities in advance.

ADMINISTRATIVE

1. The Monroe County Medical Society has instructed a special committee to inquire into the feasibility of including in a joint organization the Juneau County Medical Society. It is suggested authority be given to issue a charter for such a joint organization should the members of the societies desire to take that step.

2. The Kenosha County Medical Society has adopted a resolution asking that the Secretary present to this session of the House of Delegates an amendment to the Constitution to the end that the terms of the Councilors shall be for two years each instead of six years as at present. In a report of a special committee of the House of Delegates of the American Medical Association authorized to draft a new model constitution for state societies, a similar recommendation appears. Dr. Rock Sleyster served on this committee of the American Medical Association and the Secretary suggests he will be best in position to set forth this recommendation to the House when it is taken up for action.

3. In the same connection, the House of Delegates of the American Medical Association has approved the draft of a new model constitution for state societies. It is suggested the appointment of a special interim committee be authorized for the purpose of studying this draft and offering recommendations to the 1926 session of this House.

4. In the work of the Committee on Public Policy and Legislation, the Committee and Secretary found need for special investigation of the adequacy of the present statutes on the following subjects:
the House when it is taken up for action.

B. Licensure of specialties.

C. Necessity for legislation to require lye preparations to be labeled as "poison" and to state on such labels at least two antidotes.

It is suggested this House authorize the appointment, by the President, of special committees to make a survey of the public needs in each of these fields; such committees to report to the 1926 House of Delegates.

5. During the past year the newly created Section of Radiology held a valuable section meeting at Madison. It is the joint recommendation of the Treasurer and Secretary that this House authorize a standing appropriation, to be dispensed upon specific approval of the Council, of \$100 a year to each Section that desires to hold a special interim scientific meeting.

SUMMARY

During the past year this Society has rendered distinguished public service to the state through legislative enactment of the Society's proposal for a Basic Science Law.

The organization has also secured for itself a material measure of justice in the matter of permits under the state enforcement act, and has rendered a constantly in-

creasing service to its members and through them to the public.

That many major problems remained unsolved is evident to all. Such problems may not be solved by individuals but only through organized effort in which the efforts of individuals may be correlated. As an organization your Society has one aim: to make available scientific medical service to the largest number of citizens of this state at a cost within their means. That the fundamental basis for such service is the private practitioner is a fact that is becoming increasingly evident in this and other states. Social medical organizations that in fact assist the individual practitioner to render better service, or bring to the attention of the non-medical public the extent of scientific service that is within their reach, are to be commended most heartily. Any organization or institution whose services jeopardizes the ability of trained physicians to maintain their practice, even though it may apparently render distinct service in the present instance, in the end will accomplish a public harm.

As a Society, we must assist those organizations of the first mentioned class with every means in our power. If we find organizations of the latter class we must first make an effort to redirect their work in the only useful channel. Failing in that we must proceed in any steps that the public good may indicate.

This is a major problem of our medical organization. Never losing sight of the ultimate public needs we must strive to solve our problems in a joint way so that as individuals we may maintain and ever improve the quality of service that physicians can render.

CONCLUSION

The results of our work during the past year are attributable to the efforts of no single officer nor to the efforts of a single group. Such results as have been attained can be traced directly to the cooperative efforts of the members as individuals. With a continuance of such cooperation you may expect ever increasing service. Certain of the members, however, have been called upon more often than others because of the positions held. This report may not be concluded without specific mention of the time given by your President, Dr. Wilson Cunningham; the Chairman and members of the Committee on Public Policy and Legislation; the Chairman of the Council; Drs. Dearholt and Lotz on our Journal; Dr. J. Gurney Taylor, first vice-president and president of the State Board of Medical Examiners, and by the one person who has given more of his time than any single person that medical organization in Wisconsin might be truly successful—Dr. Rock Sleyster. To these this special mention is due.

Such response as the officers and members of this Society are giving to their Secretary makes his work an ever increasing pleasure; never a burden.

GEORGE CROWNHART,
Executive Secretary-Managing Editor.

ADDENDA

1. Summary of recommendations:
 - A. Appointment of special committees to study,

- Constitution and By-Laws,
Commitment of Insane,
Licenses of specialities, and
Needed Lye legislation.
- B. Maintain present dues.
- C. Appropriation for section meetings.
- D. Miscellany:
Authorize combination of Monroe and Juneau
County Medical Societies.

2. Proposed amendment to the constitution submitted at request of the Kenosha County Medical Society:
Amend Article IX of the Constitution "Officers" to read:

"Section 2. The President and Vice-Presidents shall be elected for a term of one year. The Secretary and the Treasurer shall be elected by the Council at its Annual Meeting in January, and each shall hold his office for one year. The Councilors shall be elected for terms of two years each, being so divided that six shall be elected each year. All of these officers shall serve until their successors are elected and installed."

WISCONSIN MEDICAL JOURNAL

Financial Statement as of July 31, 1925

ASSETS	
Accounts Receivable	\$1,460.17
Cash on hand	1,764.90
Prepaid Postage	30.54
Total	\$3,255.61
LIABILITIES	
Prepaid Advertising	\$ 58.33
Bills Payable	none
Total	\$ 58.33
Net Assets, Aug. 1, 1924.....	\$2,585.43
Net Assets, Aug. 1, 1925.....	3,197.28
Net gain during year	611.85

STATE MEDICAL SOCIETY OF WISCONSIN

MEMBERSHIP REPORT

September 1, 1925

County Society	1924		1925		Loss	Gain	Delinquents	New Members	Removals	Deceased	Honorary
	Dec. 31,	Sept. 1,	Sept. 1,	1925							
1st District—											
Dodge	28	26	—2	1	1	1	1	1	1	1	..
Jefferson	31	32	+1	..	3	1	1	1	1	1	..
Waukesha	55	52	—3	..	2	4	1	1	1	1	..
	114	110	—4	1	6	6	3	..	..	..	..
2nd District—											
Kenosha	37	39	+2	2	6	1	1	..	..	..	..
Racine	50	48	—2	1	3	4	..	..	..	..	..
Walworth	23	20	—3	2	1	..	2	..	..	2	..
	110	107	—3	5	10	5	3	..	..	..	..

3rd District—											
Dane	129	127	—2	6	12	5	..	3	..	..	..
Columbia	22	25	+3	1	4	..	..	..	..	..	..
Green	17	15	—2	..	..	1	1	..	..	..	..
Rock	77	71	—6	9	4	1	..	..	..	..	..
Sauk	27	20	—7	6	..	1	..	..	..	..	..
	272	258	—14	22	20	8	1	3	..	..	..
4th District—											
Crawford	7	8	+1	..	1	..	..	..	..	..	..
Grant	34	33	—1	..	..	1	..	..	..	..	..
Iowa	12	12	..	..	1	..	1	..	..	..	..
Lafayette	15	11	—4	3	..	..	1	..	..	..	..
Richland	10	9	—1	1	..	..	..	..	..	..	..
	78	73	—5	4	2	1	2	..	..	..	..
5th District—											
Calumet	12	12	..	1	2	1	..	..	..	..	..
Manitowoc	29	32	+3	..	4	..	..	1	..	..	..
Washington-Ozaukee	27	27	..	1	1	..	..	..	..	..	..
Sheboygan	46	44	—2	1	..	..	1	..	..	..	..
	114	115	+1	3	7	1	1	1	..	..	..
6th District—											
Brown-Kewaunee ..	58	50	—8	6	1	2	..	1	..	..	..
Door	7	7	..	1	1	..	..	..	..	..	..
Outagamie	37	37	..	..	2	2	..	..	..	..	..
Fond du Lac.....	41	42	+1	..	3	1	1	..	..	..	..
Winnebago	53	55	+2	..	3	1	..	..	..	..	..
	196	191	—5	7	10	6	1	1	..	..	..
7th District—											
Juneau	6	7	+1	..	1	..	..	..	..	..	..
La Crosse	50	49	—1	..	3	3	..	1	..	..	..
Monroe	19	20	+1	..	1	..	..	..	..	..	..
Trempealeau-J-B ..	22	23	+1	..	2	1	..	..	..	..	..
Vernon	14	14	..	1	2	1	..	..	..	..	..
	111	113	+2	1	9	5	..	1	..	..	..
8th District—											
Marquette-Florence	22	20	—2	..	2	3	1	..	..	..	..
Oconto	8	9	+1	1	2	..	..	..	..	..	..
Shawano	11	12	+1	..	3	2	..	..	..	..	..
	41	41	..	1	7	5	1	..	..	..	..
9th District—											
Clark	15	13	—2	1	1	2	..	..	..	..	..
Green Lake-W-A...	18	21	+3	1	5	..	..	1	..	..	..
Lincoln	15	15	..	..	1	..	1	..	..	..	..
Marathon	36	36	..	..	2	1	1	..	..	..	..
Portage	23	21	—2	..	..	1	1	..	..	..	..
Waupaca	23	24	+1	..	1	..	..	..	..	..	..
Wood	26	24	—2	..	..	1	1	..	..	..	..
	156	154	—2	2	10	5	4	1	..	..	..
10th District—											
Barron-P-W-S-B ...	37	39	+2	..	4	1	1	..	..	..	..
Chippewa	20	23	+3	..	3	..	..	..	..	..	..
Eau Claire & A. C.	57	57	..	..	3	3	..	..	..	..	..

Pierce	6	5	-1	1	..	..	..	..	..
Rusk	10	9	-1	1	1	1	..	..	..
St. Croix.....	12	7	-5	1	..	1	1	2	..
	142	140	-2	3	11	6	2	2	..
11th District—									
Ashland-B-I	26	27	+1	2	3	..	..	..	..
Douglas	39	38	-1	1	..	..	..	..	..
Langlade	12	13	+1	..	1	..	..	..	..
Oneida-F-V	13	13	..	2	3	1	..	..	..
Price-Taylor	12	16	+4	..	4	..	..	..	..
	102	107	+5	5	11	1	..	..	..
12th District—									
Milwaukee	506	499	-7	18	19	4	4	..	..
Grand Total.....	1942	1908*	-34	72	122	53	22	9	..

*In addition to the total membership eight members, now deceased, paid dues for 1925.

SPECIAL REPORT ON HYGIEIA

To the Members of the 1925 House of Delegates and of the Society:

In April, 1923, there appeared the first number of HYGIEIA, "A Journal of Individual and Community Health," proposed and authorized by the House of Delegates of our American Medical Association.

Since its inception this Journal, written for the non-medical reader, has steadily increased in value until we find it today as the one outstanding and most satisfactory medium in which we may set forth the great progress made by scientific medicine. It truly presents the group opinion and ideals of the profession.

Its value as a medium for education of the non-medical public in the advances made by medical science and to the opportunities for service that modern medicine has placed in the hands of each physician has been vividly demonstrated in this state. In meeting members of the last Legislature, to whom HYGIEIA was sent by this Society, your Secretary ventures to say that without exception their first comment was upon the value of HYGIEIA and how much it was appreciated.

During the past year Wisconsin led every other state in the percentage of increase of subscriptions to HYGIEIA. The fact remains, however, that we have but fifteen hundred subscribers in all of Wisconsin. Speaking in numbers rather than percentages, surely the subscription list in Wisconsin is not of a size to which we can point with pride.

HYGIEIA is in every sense of the word our publication. If we can have fifteen thousand subscribers instead of fifteen hundred we may say that we have a good start on a lay educational campaign in this state. The results of such a subscription list would be evident to every member.

We are now about to enter upon a special HYGIEIA campaign with a field representative. The hope is expressed that this representative will receive your enthusiastic reception.

Pending the visit of this representative, the members themselves can take a no more advisable step than to place HYGIEIA in their reception rooms.

This report constitutes the second time in two and a half years that your Secretary has asked for the cooperation of every member in a project that is in the interest of public health. If we are successful in this particular work it will be because no member failed to respond.

We have demonstrated what can be accomplished by splendid cooperative effort. Let us now place Wisconsin at the head of our HYGIEIA list in numbers as well as in percentage.

GEORGE CROWNHART.

PRESIDENT CUNNINGHAM: You have heard the report of the Secretary. What is your pleasure?

DR. HORACE M. BROWN: Mr. President, it is true that I am not a member of this board as a delegate, that is a state delegate to this meeting of the State Society. One of the items in the address made by the speaker calls for a little very careful consideration, if I may speak on the subject at this time. We are, as an organization, a medical organization of the state of Wisconsin, in a very peculiar position. Medicine has advanced by leaps and bounds in the last ten or fifteen years, and what it means to be a physician and be a member of a medical organization today is a totally different thing from what it meant in 1847. This Society is based for its existence upon a gathering of five men who got together in 1847 and organized a State Society and, as they thought, provided a liberal method for the organization of county societies. We have entirely outgrown the methods that were in use at that time. The county societies, which are dependent for their existence upon charters derived from this organization, practically have no existence except that form of existence which the dog chained to his kennel enjoys, because the county societies of this state exist as the result of a perfectly worthless charter issued by the State Society to those county societies. Let them try almost any way they will to make elastic the privileges that are supposed to accrue to them from the possession of their charter and they find themselves bumping up against a law and then another law and laws interminable, useless and obstructive.

This last year there was an effort made by the Milwaukee County Medical Society to reorganize itself upon a business basis, which should be in accordance with our present form of civilization, and to be organized upon the plan which should be in accord with modern methods of doing business and in accordance with modern views. The burden of drawing up the plan for that organization was placed upon my shoulders. I gave it a great deal of attention and developed a form of organization, which was to be in the form of a corporation, dependent upon the State Society for its existence and affiliated with the State Society. That form of organization would have made it possible for the Milwaukee County Medical Society or any other society to grow, to get rid of the quarrels and squabbles

and fights and rows that exist in societies at the present time, and to eliminate from its membership the undesirable members without difficulty. In other words, it would have enabled them to make what is now a hopeless effort at house cleaning as easy as the use of Sapolio in cleaning house.

After the thing was all drawn up, done and finished and lawyers had passed upon the idea, we discovered that in 1847, by act of legislature, the parent Society, this Society, of all the county societies was tied hand and foot, and, although a gentleman, who is now seeking a very high office in this state, had passed upon a previous effort to do something about the matter as being all right, it was found that that was absolutely hopeless and the suggested change or changes made by the Secretary could not be done by act of this Society nor any of the other medical societies in this state that depend for their existence upon a charter from this State Society. It must first be done by an act of legislature to abolish the old form of organization and to make an elastic method of organization for this Society and for all societies dependent upon it. Therefore, it would seem to me that that part of the report of our Secretary-Manager that referred to the organization of societies should be very carefully considered before it is adopted and that an effort should be made to get such advice as will point the path for this Society and lead the way in the direction that will be sure to lead to the result that we desire.

PRESIDENT CUNNINGHAM: The report of the Secretary goes to a reference committee.

DR. HORACE M. BROWN: I merely wished to bring it up now as an outsider, because I am not a delegate here. I am only reporting as the reporter for a board appointed by this Society. That is the only reason I am here. I speak as an outsider offering advice.

PRESIDENT CUNNINGHAM: I understand this report will be referred to a committee that reports to the House of Delegates at a later meeting.

I wish to announce the following committee appointments:

On the Committee on Public Policy and Legislation I will appoint Dr. A. J. McDowell as Chairman; Dr. A. J. Gates and Dr. J. C. Baird.

Committee on Resolutions: Dr. T. W. Nuzum, Chairman; Dr. H. Greeley and Dr. Frank Thompson.

Committee to act on report of the Executive Secretary: Dr. W. E. Bannen, Chairman; Dr. J. F. Mauermann and Dr. J. M. Dodd.

SECRETARY CROWNHART: Mr. President, the members will note on page seven there has been included the announcement of the fact that there is a special report on Hygeia. I think no one is so well acquainted with what is in that report and its purpose as Dr. Sleyster. May I suggest, Mr. President, that we call on Dr. Sleyster at this time to tell of the work they plan to do in Wisconsin.

PRESIDENT CUNNINGHAM: Dr. Sleyster.

DR. ROCK SLEYSER (Wauwatosa): Mr. President and Gentlemen: I didn't expect to be called on to

explain this, and there is very little to say about it. I wish every member of this House of Delegates might have been in the session of the American Medical Association House of Delegates this year and received some of the enthusiasm we delegates received regarding Hygeia. It is your magazine, you are publishing it; each and every one of you are stockholders in it. It is the great medium that we have sought for years to get across to the public the big medical idea of health; to teach them the value of medical ethics and proper practice; and to teach them how to differentiate between the true practitioner and the cult. It is something we have worked on for years, it is something we wanted for years, and finally the American Medical Association authorized it at the New Orleans session.

It is rather peculiar but I don't imagine that more than fifteen or twenty per cent of the members of this Society actually subscribe for the magazine, the thing they need in their communities. Some few weeks ago I suggested to Mr. Brown, the Business Manager of the American Medical Association, that I felt if they would employ some one to come into Wisconsin, some one whom we could send out through the state to call on physicians to get them better acquainted with Hygeia, we could do something here that would set an example for other states.

A little office girl here in Milwaukee in one of the offices of one of our physicians recently conceived the idea of handing a copy of Hygeia to the doctor's patients while they were waiting to see him. Then she conceived the idea of soliciting their subscription to Hygeia. She had in mind making a little easy money for herself and at the same time doing something for Hygeia. She was remarkably successful and we felt that one good way to start the work would be to have a girl like this employed to call on the different physicians in the state and try to interest their office girls in doing the same thing. We are able to secure a Wisconsin girl to do this work, and she is going to go through the state during the coming few months and she is going to call on the physicians. We have her here at this session. She is going to be in a little Hygeia booth at the exhibit hall, and I hope you will all get acquainted with her. She is a Fond du Lac girl. She is too bashful to make a speech, so I am going to ask her to stand up so you will see what she looks like. Miss Elza Zinke, of Fond du Lac. (Applause.)

I don't know of any more effective way of putting Hygeia across to the public than cooperation with you men, having a copy of it in your waiting room, getting the cooperation of your office girls to see that your patients look at Hygeia and get acquainted with it while they are waiting to see you. It is going to give that office girl a chance to pick up a little easy money; it is going to put Hygeia on the map if you will encourage her to take subscriptions for it.

PRESIDENT CUNNINGHAM: Many doctors have Hygeia on the waiting room table but can't keep it there. The patients run away with it.

Gentlemen, the next order of business is the election of a Committee of Twelve on Nominations, one from

each councilor district. The Secretary will read the names of the counties composing the different districts.

SECRETARY CROWNHART: As we read the counties, may I suggest the delegates from those counties stand up and among themselves make the nomination. The First District is Dodge, Jefferson and Waukesha Counties.

DR. ACKLEY (Waukesha): I nominate Dr. A. W. Rogers.

The nomination was seconded and carried.

SECRETARY CROWNHART: The Second District is composed of Kenosha, Racine and Walworth Counties.

DR. J. F. HASTINGS (Kenosha): I nominate Dr. G. W. Nott, of Racine.

The nomination was seconded and carried.

SECRETARY CROWNHART: The Third District is composed of Dane, Columbia, Green, Rock and Sauk Counties.

DR. J. F. MAUERMANN (Monroe): I nominate Dr. Nuzum.

The nomination was seconded by Dr. Schmeling, and carried.

SECRETARY CROWNHART: The Fourth District is composed of Crawford, Grant, Iowa, LaFayette and Richland Counties.

PRESIDENT CUNNINGHAM: Dr. McDowell, being the one present from this District, is elected by acclamation.

SECRETARY CROWNHART: The Fifth District is composed of Calumet, Manitowoc, Washington-Ozaukee and Sheboygan Counties.

DR. H. M. LYNCH (Allenton): I nominate Dr. J. M. Kelley.

The nomination was seconded and carried.

SECRETARY CROWNHART: The Sixth District is composed of Brown-Kewaunee, Door, Outagamie, Fond du Lac and Winnebago County Societies.

DR. EUGENE KNOX (Green Bay): I nominate Dr. D. N. Walters, of Fond du Lac.

The nomination was seconded and carried.

SECRETARY CROWNHART: The Seventh District is composed of Juneau, La Crosse, Monroe, Trempealeau-Jackson-Buffalo and Vernon County Societies.

DR. C. F. PETERSON (Independence): I nominate Dr. Bannen.

The nomination was seconded and carried.

SECRETARY CROWNHART: The Eighth District is composed of Marinette-Florence, Oconto and Shawano County Societies.

DR. REDELINGS: I nominate Dr. A. J. Gates.

The nomination was seconded and carried.

SECRETARY CROWNHART: The Ninth District is composed of Clark, Green Lake-Waushara-Adams, Lincoln, Marathon, Portage, Waupaca and Wood County Societies.

DR. T. E. LOOPE (Iola): I nominate Dr. L. E. Spencer, of Wausau.

The nomination was seconded by Dr. Merrill, and carried.

SECRETARY CROWNHART: The Tenth District is composed of Barron-Polk-Washburn-Sawyer-Burnett, Chip-

pewa, Eau Claire and Associated Counties, Pierce, Rusk and St Croix County Societies.

DR. E. P. ELLENSON (Chippewa Falls): I nominate Dr. D. L. Dawson, of Rice Lake.

The nomination was seconded and carried.

SECRETARY CROWNHART: The Eleventh District is composed of Ashland-Bayfield-Iron, Douglas, Langlade, Oneida-Forest-Vilas and Price-Taylor County Societies.

DR. J. M. DODD (Ashland): I take pleasure in nominating Dr. J. C. Wright of Antigo.

The nomination was seconded and carried.

SECRETARY CROWNHART: The Twelfth District is composed of only Milwaukee County Society.

DR. J. W. HANSEN (Milwaukee): Mr. Chairman, I nominate Dr. Thompson.

The nomination was seconded and carried.

SECRETARY CROWNHART: Mr. President, may I suggest now, immediately following adjournment of this session of the House of Delegates your Committee on Nominations go into the next room and decide among themselves when they want to hold their meeting. Dr. Rogers, as the first member on the committee, when this meeting is over will you come forward and take this envelope for the committee?

PRESIDENT CUNNINGHAM: The next order of business is the election of delegate and alternate to the American Medical Association to succeed Dr. Joseph F. Smith, of Wausau, delegate, and Dr. R. E. Mitchell, of Eau Claire, alternate.

DR. G. J. KAUMHEIMER (Milwaukee): I nominate Dr. Smith to succeed himself.

The nomination was seconded variously and carried.

PRESIDENT CUNNINGHAM: Nominations are in order for an alternate.

DR. D. L. DAWSON (Rice Lake): I nominate Dr. Mitchell to succeed himself.

The nomination was seconded by Dr. Baird, and carried.

PRESIDENT CUNNINGHAM: The next order of business is the election of Councilors to succeed Dr. O. B. Bock, Fifth District, and Dr. F. Gregory Connell, Sixth District.

DR. O. A. FIEDLER (Sheboygan): I nominate Dr. Bock to succeed himself as Councilor from the Fifth District.

The nomination was seconded by Dr. Lynch, and carried.

DR. F. THOMPSON (Milwaukee): Mr. President, I take pleasure in nominating Dr. Gregory Connell to succeed himself.

The nomination was seconded by Dr. Redelings.

SECRETARY CROWNHART: Mr. President, pardon me for calling your attention to it, but I wonder if it wouldn't be better (I don't want to offend either of the doctors involved) if the nomination would come from Dr. Connell's district. Will you agree to that, Doctor?

DR. THOMPSON: I agree to that.

DR. M. J. SANDBORN (Appleton): I take great pleasure in nominating Dr. Connell to succeed himself.

The nomination was seconded by Dr. Redelings and carried.

PRESIDENT CUNNINGHAM: The next order of business is the election of committees and delegates. First we have the election of a Committee on Public Policy and Legislation. Nominations are in order for members of the Committee on Public Policy and Legislation.

DR. T. W. NUZUM (Janesville): Mr. President, I move we retain the present committee.

The motion was seconded by Dr. Mauermann, and carried.

PRESIDENT CUNNINGHAM: Next is the Committee on Medical Education.

DR. JOSEPH SMITH (Wausau): I move the present Committee be elected to succeed itself.

The motion was seconded variously and carried.

SECRETARY CROWNHART: Mr. President, in the next instance we made an error. It says the Committee on Publication, it should be the Editorial Board. The present Board consists of Dr. Oscar Lotz, Dr. Joseph F. Smith, and Dr. Hoyt E. Dearholt.

DR. J. F. MAUERMANN (Monroe): I move the present board succeed themselves.

The motion was seconded by Dr. Wright, and carried.

PRESIDENT CUNNINGHAM: The next order of business is election of a delegate to the Council on Health and Public Instruction, American Medical Association, to succeed Dr. Windesheim, of Kenosha.

DR. G. WINDESHEIM (Kenosha): Mr. President, the Council on Health and Public Instruction of the American Medical Association has ceased to exist and did so two years ago. I don't see why a delegate should be elected to anything that does not exist. (Laughter.) I, therefore, move you, you dispense with that election.

PRESIDENT CUNNINGHAM: I believe your point is well taken.

Next is election of a delegate to the Council on Medical Education of the American Medical Association to succeed Dr. L. F. Jermain, of Milwaukee.

DR. S. HIGGINS (Milwaukee): I move the re-election of Dr. Jermain to succeed himself. I think he is perhaps the most fitted person for that position.

The motion was seconded by Dr. Thompson, and carried.

PRESIDENT CUNNINGHAM: The next order is election of members of the Committee on Health and Public Instruction to succeed Dr. Washburn, of Milwaukee, and Dr. I. F. Thompson, of Milwaukee.

SECRETARY CROWNHART: The two elections were made necessary because Dr. Washburn's term expires and Dr. Thompson is removed from the state. We have to elect two on that committee.

DR. ROCK SLEYSER (Wauwatosa): I move this be referred to the Nominating Committee for more mature consideration.

The motion was seconded by Dr. Sandborn, and carried.

PRESIDENT CUNNINGHAM: Next is the election of a member of the Committee on Hospitals to succeed Dr. J. V. R. Lyman, of Eau Claire.

SECRETARY CROWNHART: Mr. President, wouldn't it expedite things if Dr. Mitchell would tell us whether Dr. Lyman is able to continue the work.

DR. MITCHELL: Mr. President, temporarily Dr. Lyman is incapacitated and it will be some months at least, possibly a number of months before he is able to resume work.

DR. SLEYSER: Mr. President, I move this be referred to the Nominating Committee.

The motion was seconded by Dr. Mauermann, and carried.

DR. EDWARD EVANS (La Crosse): Mr. Chairman, if I am not entirely out of order might I suggest that Lyman is such a darned good fellow and he likes to get a word of commendation I am sure, so it might be nice if this House of Delegates, through our Secretary, would write him a letter of sympathy and express the hope that he will soon be among us again, and show him we haven't forgotten him.

The motion was seconded by Dr. Connell, and carried by a rising vote.

SECRETARY CROWNHART: Mr. President, under the next order the amendment submitted by the Kenosha County Medical Society will be found as an addenda to the Secretary's report. That amendment, under the Constitution, must go over until the meeting tomorrow evening. The recommendations of the Committee on Public Policy and Legislation and the recommendations of your Executive Secretary have both been referred to reference committees, and we wouldn't want to take those up tonight.

PRESIDENT CUNNINGHAM: Next is under the order of new business. Is there any new business to come before the house?

SECRETARY CROWNHART: Mr. President, I suggest that the house either approve or disapprove of the time selected for their next meeting, which is seven tomorrow evening in this room. That will be before the smoker. It is a little early, but we can get through with the business in time for the smoker. If you do not approve of the date, if you will mention any other hour that is satisfactory, I am sure I can arrange a place of meeting for you.

DR. A. J. McDOWELL (Soldiers Grove): I would move that we select seven o'clock tomorrow evening as the time of the next meeting of this body in this place.

The motion was seconded by Dr. Nuzum, of Janesville, and carried.

PRESIDENT CUNNINGHAM: Is there anything more under the heading of new business?

Secretary Crownhart again announced the meeting of the Council and suggested that the newly elected committees meet.

DR. J. P. McMAHON (Milwaukee): May I suggest the matter Dr. Brown brought up a while ago is of very great importance. The county medical societies at the present time are not in a position to expel undesirable members. I remember last year these different committees didn't quite understand just what had been assigned to them. I would be interested to know, and I am sure Dr. Brown would be, as to which committee is going to take up this matter he brought up with reference to the incorporation of the society.

PRESIDENT CUNNINGHAM: That was referred to in the Secretary's report.

DR. W. E. BANNEN (La Crosse): If my committee is the one that Dr. McMahon refers to, we would like to have Dr. Brown meet with us, too.

PRESIDENT CUNNINGHAM: A motion is in order for adjournment until seven o'clock tomorrow evening.

DR. J. F. MAUERMANN (Monroe): Mr. President, I move we adjourn until seven o'clock tomorrow evening.

The motion was seconded by Dr. Bannen, and carried. The meeting adjourned at nine-forty o'clock.

ADJOURNMENT.

HOUSE OF DELEGATES

Wednesday Evening, September 16, 1925

The meeting was called to order by President Cunningham at seven-fifteen o'clock in the Red Room of the Hotel Pfister, Milwaukee, Wisconsin.

PRESIDENT CUNNINGHAM: The House of Delegates will please come to order.

I will call on the Secretary to call the roll.

SECRETARY CROWNHART: Mr. President, I am informed by my assistants that there is a quorum present.

PRESIDENT CUNNINGHAM: The first order of business is the report of the reference committee on Public Policy and Legislation. Dr. McDowell.

DR. A. J. McDOWELL (Soldiers Grove): Mr. President, your committee appointed to review this committee report of the Committee on Public Policy and Legislation feel they are to be congratulated on the good work they did during the last session of the legislature. We can say, well done ye good and faithful servants.

As to the recommendations for the future, we advise that the work of Hygeia be extended and that an appropriation of \$500 be made for that purpose. As to the Lay issue of the Medical Journal, we advise that \$1,000 be appropriated for that purpose.

As to the extension of this work through newspapers as advised by the committee, the committee recommends that an appropriation of \$2,200 be made for that purpose. We feel that we hardly dare recommend this appropriation without knowing more of the financial condition of the Society. We, therefore, pass this part of the report up to the House of Delegates.

PRESIDENT CUNNINGHAM: Gentlemen, you have heard the report of the Chairman of the reference committee on the report of the Committee on Public Policy and Legislation. What is to be done? The report is before you.

DR. J. F. MAUERMANN (Monroe): Mr. President, I move we accept the report.

The motion was seconded by Dr. O. H. Epley, of New Richmond, and carried.

SECRETARY CROWNHART: Mr. President, before we go into the next order of business, I think it would be well if we finished up the question of the report of the Committee on Public Policy and Legislation. The reference committee has returned to the house the question of whether the Society shall appropriate for the coming year the sum of \$2,200 to be used for the

purpose of making available to the press of the state, specifically the daily press, and the weekly press so far as possible, information relating to medical science, written in an attractive manner purely as a news story from time to time. I might say that you had the report of the Committee on Public Policy and Legislation, and I am convinced the committee has given this much thought. I believe that the funds will be available, and in any case the funds have to be approved by the Council. The Council could, at its meeting, approve the funds for the first six months of the year, withholding approval for the last six months in case the budget seems to indicate that they might possibly run short.

It has been often brought to the attention of the Secretary when investigating violation of ethics in newspaper stories in the press that there is no group anywhere in Wisconsin that makes available this information to the press of the state. I think that it would be a service, not only to the newspapers, but to the public generally. As Dr. Cunningham so well expressed this thought in an interview today, the newspapers reach thousands that we can reach in no other way. I am quite convinced myself that this is a step that the House can well take with the idea that the Council will approve the appropriation for the first six months of the year. That will give us an opportunity to try it out and if at that time it isn't working successfully and does not meet the end that we have in view, the Council can withhold approval of the rest of the appropriation.

Mr. President, I merely mention that because I think possibly I am best in position to give that information to the House. I might add this: The plan the committee had in mind was that they would take a competent newspaper man who was always on deck, if I may use that expression, and they would have to assist him a large advisory committee on which he might call for information on any subject. If it were a subject of news that relates to pediatrics, he would have a pediatrician on whom he could call to have his story enlarged, to have it embellished, to have it gone over and corrected before publication. Such a committee would be formed with the advice of the members of the Council. Certainly the President of the Society and the committee as a whole would from time to time assist in editing the stories. When new events arise that demand a story, such as for instance the recent statements regarding cancer from England, then that newspaper man would have some one with whom he could get into immediate touch regarding that particular situation.

I need only call your attention to this fact: That in another state when those cancer reports came out, they had a similar committee and a similar appropriation, and that story from England had not been on the wires but about six or eight hours before the state committee had a story out in the press, on the authority of the State Medical Society, pointing out that this was not a cancer cure, that some discovery may have been made

and some advance very probably had been made, but the only known cure for cancer today is early discovery and then surgery or such other treatment as might be indicated. They pointed out that following every announcement of this sort the market was always flooded with fake cures and warned the public to beware of them. It seems to me that does a tremendous service for the people of the state. That is one of the ways that your committee had in mind that this newspaper service might work out.

PRESIDENT CUNNINGHAM: This matter is open for discussion.

DR. ROCK SLEYSER (Wauwatosa): The report is accepted.

SECRETARY CROWNHART: This part was not, Dr. Sleyser. This part was referred back to the House of Delegates.

DR. F. THOMPSON (Milwaukee): Mr. President, I would like to know just exactly what that motion would require, the sum of \$2,200?

SECRETARY CROWNHART: That is for a year, Doctor.

DR. THOMPSON: I make a motion that the House of Delegates furnish the Committee on Public Policy and Legislation with \$2,200 for the furtherance of the work as they desire.

The motion was seconded by Dr. Mauermann.

PRESIDENT CUNNINGHAM: The motion has been made and seconded that the sum of \$2,200 be appropriated for the purpose as stated. Are there any remarks on it?

I might add it seems to me it might be advisable to include the propaganda of cancer under this same heading. I don't know whether that could be worked out or not.

DR. THOMPSON: That has been worked out.

PRESIDENT CUNNINGHAM: Have the one appropriation cover both of those items of propaganda.

DR. EDWARD EVANS (La Crosse): I don't think Dr. McMahon's remarks last night were put in the form of a motion, consequently I don't think they were referred to any committee.

SECRETARY CROWNHART: They were referred to a committee, Dr. Evans. They were referred to the Committee on Resolutions, as I remember. It has been taken up.

The motion was carried.

PRESIDENT CUNNINGHAM: The next is a report of the committee on the report of the Secretary, Dr. Bannen, Chairman.

DR. W. E. BANNEN (La Crosse): Mr. President and Delegates: The following is the report of the committee on the report of the Executive Secretary and Manager: The committee has found this report not only an inspiration, but a revelation. It gives a better appreciation of the State Medical Society and the duties it has been and is performing for the medical profession, for the people of Wisconsin and for the state of Wisconsin. The committee recommends that this House of Delegates give proper expression to the members of the Society assembled and to the county societies, of the work accomplished and the pledge of hearty support and

cooperation for the continuance of the good work under our present managing Secretary.

The work on increase in membership, the work through the Journal, the marked improvement in the Journal, service to members, the work in the legislative lay education and the recent legislation and the work through lay education is commended. The committee finds that the suggestion of the Secretary, that a special committee be appointed to determine the advisability of forming joint societies with the membership of the counties, is limited, as per the request of Monroe and Juneau County Societies, necessarily on account of the original charter of the State Society with its limitation of power. Therefore, it is recommended that the President appoint a special committee with full power to secure all available information, secure expert and legal opinions and render a full report to the Council as to the feasibility, the advisability and the necessity for any changes to be made in the By-laws and original charter to give the State Medical Society of Wisconsin an ample charter to operate as an up-to-date organization.

The committee recommends that the other suggestions of the Executive Secretary under heading A, namely, the commitment of the insane, licensure of specialties, and needed lye legislation be referred to the Committee on Public Policy and Legislation.

PRESIDENT CUNNINGHAM: Gentlemen, you have heard the report of the reference committee. What is your pleasure?

DR. ROCK SLEYSER (Wauwatosa): Mr. President, I should like to ask the committee if they took action on the suggestion of revision of the Constitution and By-laws.

DR. BANNEN: That was taken care of in our recommendation where we recommended that the President of the Society appoint a committee to have full power. It is recommended the President appoint a special committee with full power to secure all available information, secure expert and legal opinions and render a full report to the Council on the advisability, the feasibility and the necessity for any changes to be made in the rules, the By-laws and original charter and Constitution.

DR. M. J. SANDBORN (Appleton): I move its acceptance.

The motion was seconded by Dr. Nuzum, of Janesville, and carried.

SECRETARY CROWNHART: Mr. President, before we go on to the next order of business, I would like to introduce to the members of the House Dr. M. L. Harris, who is Chairman of the Judicial Council of the American Medical Association. (The audience arose and applauded.)

PRESIDENT CUNNINGHAM: Next we will have the report of the Committee on Resolutions by Dr. T. W. Nuzum.

DR. NUZUM: My Secretary will read them.

DR. H. P. GREELEY (Madison): The Committee is composed of Dr. T. W. Nuzum, Dr. F. Thompson and myself and submits the following resolutions.

"Whereas, It has come to the attention of this committee that under most recent order of the Federal Prohibition Department the permit division of the department for Wisconsin has been ordered discontinued; and,

"Whereas, Under the present order Wisconsin as a state is divided into the Western and Eastern Judicial Districts to be administered from St. Paul and Chicago, respectively; and,

"Whereas, Such a division of Wisconsin into two permit districts, both to be administered from other states, would, in the belief of this Society, lead to endless confusion of interpretations of the law, to confusion as to district boundaries, and very probably to frequent delays as result of the inability to have personal interviews between members of the profession and the federal officials; therefore, be it

"Resolved, By the State Medical Society of Wisconsin, in 79th Annual Meeting duly assembled, that the two thousand members of this Society, through their elected delegates, respectfully petition and urge the Assistant Secretary of the Treasury to revoke the order for division and to maintain Wisconsin as a single permit district with offices in Milwaukee. Further, that the Secretary of the Society is hereby instructed to wire a copy of this resolution to the Honorable President of the United States; to the Assistant Secretary of the Treasury, General L. C. Andrews, and to United States Senator, Honorable Irvine L. Lenroot, expressing the sincere hope of the members of the Society that the honored high officers of these United States will find it possible and not incompatible with their duties to grant this earnest desire of the medical profession of Wisconsin."

DR. G. J. KAUMHEIMER (Milwaukee): I move its adoption.

The motion was seconded by Dr. Windesheim, and carried.

DR. GREELEY: "Resolved, That the sum of \$500 be appropriated for the completion of the program outlined by the Committee on Cancer, with a recommendation that the booklet 'Essential Facts About Cancer' be sent to all physicians of the state and a request be enclosed asking each physician to remit twenty-five cents for the same."

We felt that that would partly defray the expense in case the \$500 would have to be totally spent, and that a physician would think more of his booklet if he paid something for it than if it came in the mail without any obligation on his part.

PRESIDENT CUNNINGHAM: Gentlemen, you have heard the resolution. A motion is in order for its acceptance.

DR. JOS. SMITH (Wausau): I move the adoption of the resolution.

The motion was seconded by Dr. Wright.

DR. G. WINDESHEIM (Kenosha): According to the statement of Dr. McMahon last night, I don't believe \$500 is enough. I think that sum ought to be increased by at least \$200.

DR. A. F. SCHMELING (Columbus): Mr. President,

last year the delegates were instructed to tell their individual members that a book on cancer would be issued free of charge, that the dues were left at the same amount on that account, that several appropriations were made. Now if we go back to them and ask twenty-five cents, I think probably some won't be satisfied.

DR. REDELINGS: Mr. President, make it fifty cents or a dollar. I don't believe this is any twenty-five cent crowd.

DR. G. J. KAUMHEIMER (Milwaukee): I agree with Dr. Redelings. Another thing, the average man will find it a nuisance to mail the sum of a quarter. If he puts it in an envelope, it will work out. He is not going to dig out a hole in some pasteboard and put adhesive tape on it and mail it properly, and he will forget it. I don't think the game would be worth the candle. I ask you gentlemen how many of you would go to all that trouble to mail a quarter. You would postpone it until some other time and forget about it. If you think this book is worth a dollar, send us a dollar; if you don't you are welcome to it.

DR. T. W. NUZUM (Janesville): The \$500 was all that was asked of the committee. We allowed the full amount they asked for.

The motion to adopt the resolution was carried.

DR. EDWARD EVANS (La Crosse): Are we to understand a dollar bill will be put in for the convenience of the practitioner?

PRESIDENT CUNNINGHAM: For the convenience of the practitioner.

DR. GREELEY: "Resolved, That the annual dues to the Society be kept at the present figure of \$9, as suggested by the Executive Secretary."

SECRETARY CROWNHART: Mr. President, the matter of due is strictly one which I want to leave to the House of Delegates. If there is any one here that does not agree with that, I sincerely hope the discussion will be free and frank.

DR. G. J. KAUMHEIMER (Milwaukee): I move the adoption of this resolution.

The motion was seconded by Dr. Windesheim, and carried.

DR. GREELEY: "Resolved, That the Committee on Public Policy and Legislation take up the matter of alteration of the Constitution and the state charter, as recommended by Dr. H. M. Brown to the House of Delegates."

DR. J. F. MAUERMANN (Monroe): I move the adoption of this resolution. I think that resolution was covered by the other committee. The President was authorized to appoint a committee for that particular purpose.

The motion was seconded by Dr. Epley.

PRESIDENT CUNNINGHAM: That matter is already covered.

DR. GREELEY: I had to read it.

"Resolved, That the recommendation of the special committee to the American Medical Association that the term of office of the Councilors of the State Society be shortened to two years be accepted; be it further

"Resolved, That no Councilor be eligible for more than two consecutive terms of office."

DR. ROCK SLEYSER (Wauwatosa): Mr. President, as long as we are going to revise the Constitution and By-laws anyway, it seems to me it would be better to let this matter go over to the committee which will draw up the Constitution and By-laws and present it to the House next year. That will give the committee a chance to give this matter mature thought and consideration. It will give the House of Delegates time so that every delegate can consider it more fully than they could tonight.

I move this be referred to the committee which will be appointed to draw up a new Constitution and By-laws.

The motion was seconded by Dr. G. W. Nott, of Racine, and carried.

DR. GREELEY: "Resolved, That the State Medical Society of Wisconsin in 79th annual session in Milwaukee welcome to his new post at the State University, President Glenn Frank. We take this opportunity to express our faith in him, to promise him our cooperation and support. We do this in high hope of great achievement for the future of the University and the state."

DR. J. J. SEELMAN (Milwaukee): I move its adoption.

The motion was seconded by Dr. Kaumheimer.

SECRETARY CROWNHART: Will Dr. Seelman agree to having the Secretary instructed to wire that so he will get it before he reads it in the newspapers?

DR. SEELMAN: Yes.

The motion was carried.

SECRETARY CROWNHART: Mr. President, again your Secretary calls to the attention of the members that we have to have a session on Thursday morning. At that time your Committee on Nominations reports its suggestion for a President, first, second and third Vice-Presidents and its suggestion for a place of meeting for next year. The suggestions of the Committee on Nominations, of course, do not preclude further nominations from the floor for any of these offices or for another city.

Because the scientific session starts at eight-thirty tomorrow morning at the Auditorium, your Secretary tentatively suggested and listed in the program that the House of Delegates meet at eight-fifteen in the men's rest room at the Auditorium. That is just back of the speaker's stand in the Auditorium. Does that meet with the approval of the House?

DR. M. J. SANDBORN (Appleton): I move that we meet at eight o'clock tomorrow morning in the rest room.

The motion was seconded by Dr. Mauermann, and carried.

PRESIDENT CUNNINGHAM: Is there any new business?

DR. EDWARD EVANS (La Crosse): Does the Council have to have a meeting tomorrow, Mr. Secretary?

SECRETARY CROWNHART: Yes, I suggest the Council meet tomorrow afternoon at five o'clock in the rest

room at the Auditorium, if that is agreeable with all of the members of the Council. That will give them an opportunity to have their meeting after the House of Delegates and conclude the work of the Council.

DR. D. L. DAWSON (Rice Lake): Before we adjourn, it seems to me tonight we have had a very nice report from the reference committee on our Secretary-Manager's report, and it seems to me we might show our appreciation as a body. I move a rising vote of thanks to our Secretary in appreciation of the good work of the past year.

The motion was seconded variously, and carried by a rising vote. (Applause.)

SECRETARY CROWNHART: Mr. President, I simply want to add that as I go around the state visiting the county medical societies, and I am trying to get out as rapidly as I can, more and more I enjoy my work, because as I meet the members of the Society, they are without exception always interested and always willing to cooperate, and that is what makes the work such a pleasure. (Applause.)

DR. F. THOMPSON (Milwaukee): I move we adjourn.

The motion was seconded by Dr. Dawson, and carried. The meeting adjourned at seven-forty-five o'clock.

ADJOURNMENT.

HOUSE OF DELEGATES

Thursday Morning, September 17, 1925

The meeting was called to order by President Cunningham at eight-ten o'clock in the men's rest room of the Auditorium, Milwaukee, Wisconsin.

PRESIDENT CUNNINGHAM: The House of Delegates will please come to order.

The Secretary informs me we have a quorum present.

The first order of business, I believe, is the report of the Committee on Nominations.

SECRETARY CROWNHART: The sealed report is in the hands of the Secretary.

Report of the Committee on Nominations to the 1925 House of Delegates: Your Committee reports and recommends the following nominations:

President—Joseph F. Smith, Wausau.

First Vice-President—Carl Henry Davis, Milwaukee.

Second Vice-President—William E. Fairchild, Green Bay.

Third Vice-President—W. D. Stovall, Madison.

As members of the Committee on Health and Public Instruction: John P. Koehler, Milwaukee, and W. W. Bauer, Racine.

As member of the Committee on Hospitals: J. V. R. Lyman, Eau Claire.

Further, that the Eightieth Annual Meeting be held in Madison, Wisconsin.

Respectfully submitted, and here are the signatures of all the members of the committee as elected by this House Tuesday evening.

PRESIDENT CUNNINGHAM: Gentlemen, you have heard the report of the Committee on Nominations. What is your pleasure?

DR. A. F. SCHMELING (Columbus): I move the adoption of the report.

The motion was seconded by Dr. J. Powers, of Milwaukee, and carried.

SECRETARY CROWNHART: Mr. President, unless there is some new business to come before the House, this clears the Secretary's desk and he suggests that the House, when it does adjourn, adjourns subject to the call of the President should something further arise tomorrow.

PRESIDENT CUNNINGHAM: Is there anything to be offered by any members of the house? If not, I will entertain a motion to adjourn.

DR. W. H. BAYER (Merrill): I move we adjourn subject to the call of the President.

The motion was seconded by Dr. T. J. Redelings of Marinette, and carried. The meeting adjourned at eight-fifteen o'clock.

ADJOURNMENT.

PROCEEDINGS OF THE COUNCIL

FIRST MEETING

The first meeting of the Council was held at Hotel Pfister, Milwaukee, 5:00 p. m., Tuesday, September 15th, with Dr. Edward Evans, chairman, presiding.

Roll call showed the following present: Councilors Evans, Windesheim, Dodd, Rogers, Harper, Smith, Cunningham, Connell, Dearholt, Redelings, and Mitchell; Treasurer Emeritus S. S. Hall, Minneapolis; Vice-President Howard Curl, Sheboygan, Treasurer Rock Sleyster, Wauwatosa, and the following guests: J. C. Wright, Antigo; D. L. Dawson, Rice Lake; Gilbert Seaman, Milwaukee, J. P. McMahon, Milwaukee, and W. A. Fulton, Burlington.

1. Moved by Dr. Redelings, seconded by Dr. Rogers, that the minutes of the January meeting as published in the Journal be approved. Carried.

2. Moved by Dr. Mitchell, seconded by Dr. Harper, that the mail ballot of August 21st electing Dr. B. G. Stockman, Woodville, to honorary membership be confirmed. Carried.

3. The secretary set forth the need for a fire-proof filing cabinet in which to keep the important records. Moved by Dr. Smith, seconded by Dr. Redelings, that the secretary be instructed to purchase such a cabinet. Carried.

4. Moved by Dr. Rogers, seconded by Dr. Mitchell, that the Council approve payment of the statement for \$197.42 as rendered by the Committee on Cancer. Carried.

5. The secretary presented a questionnaire from the American Medical Association requesting the opinion of the State Society on the question of traffic regulations as they apply to physicians. Moved by Dr. Cunningham, seconded by Dr. Smith, that the Chairman of the Council appoint a committee of two to make such a report. Carried. The chairman appointed the treasurer and the secretary to constitute the committee authorized.

6. Upon recommendation of the secretary it was moved by Dr. Dearholt, seconded by Dr. Harper, that salary increases be granted as follows: Miss Astrid Jurgens, \$10.00 a month, effective as of September 1st;

Miss Florence Ripley, \$2.00 a week, effective as of September 1st. Carried.

7. The secretary presented facts in his possession indicating that in at least one instance cults were making an effort to be admitted to practice in municipal hospitals. After discussion it was moved by Dr. Dearholt, seconded by Dr. Smith, that a committee consisting of the chairman of the Council, president of the Society, and the treasurer be authorized to represent the Society in such questions, with power to act. Carried.

8. Moved by Dr. Mitchell, seconded by Dr. Windesheim, that the Society adopt the regulation business basis in paying any expense made by the secretary in using his car on Society business. Carried.

9. The secretary introduced Dr. W. A. Fulton of Burlington who had been invited to present evidence he had collected indicating the need of a standardized medical report blank for compensation and insurance reports. Dr. Fulton presented material he had collected and suggested that it would be a proper function of the Society to make an effort to secure some uniformity in insurance medical report blanks, particularly those used for cases under the Workmen's Compensation Act. Moved by Dr. Smith, seconded by Dr. Dearholt, that a committee be appointed by the chairman of the Council to study this situation; the committee to present a preliminary report at the January meeting of the Council. Carried.

10. The secretary introduced Dr. Gilbert Seaman, Milwaukee, to outline the proposal that the office of the State Society be located in the Academy of Medicine building. Dr. Seaman also discussed the question of the attitude of the Board of Regents of the University of Wisconsin towards the acceptance of donations from private sources for research work in the medical school. Council adjourned at 6:15 p. m.

SECOND MEETING

The second meeting of the Council was held in the Men's Rest Room, Auditorium, 1:30 p. m., Wednesday, September 16th.

Roll call showed the following present: Councilors Harper, Smith, Dearholt, Windesheim, Redelings, Evans, Cunningham, Mitchell, Rogers and Dodd, and Treasurer Rock Sleyster.

1. Moved by Dr. Harper, seconded by Drs. Smith and Dearholt, that Prof. M. F. Guyer, Department of Zoology, University of Wisconsin, be elected to associate membership in the Society. Unanimously carried.

2. Moved by Dr. Smith, seconded by Drs. Windesheim and Harper, that Prof. Harry Steenbock, Department of Agricultural Chemistry, University of Wisconsin, be elected to associate membership in the Society. Unanimously carried.

3. A general discussion was had upon the proposal that the Society establish its office in the proposed Academy of Medicine building in Milwaukee. Dr. Redelings emphasized the need of a Society home but urged that it be first determined by a vote of the Society as a whole, whether the home should be situated in Madison or Milwaukee. Dr. Harper pointed out the advantages of having the Society office at Madison and

urged that this location be given most careful consideration. Dr. Windesheim declared that the suggestion of establishing the office in Madison should receive approval for the reason that the full time officer of the Society had to spend so much time in Madison at the state departments and legislature and pointed out that the present arrangement meant added expense and loss of time.

It was moved by Dr. Dearholt, seconded by Drs. Mitchell and Redelings, that a committee consisting of the president of the Society, the chairman of the Council, and the treasurer be created with power to act. Carried.

4. The Council adjourned at 2:15 to the following day.

THIRD MEETING

The third meeting of the Council was held in the Men's Rest Room, Auditorium, 1:30 p. m., Thursday, September 17th.

Roll call showed the following present: Councilors Evans, Redelings, Smith, Rogers, Dodd, Windesheim and Dearholt.

1. Moved by Dr. Redelings, seconded by Dr. Smith, that the Council approve appropriations made by the House of Delegates for Hygeia, the Third Annual Lay Issue, and one-half the appropriation for newspaper service, such amount to cover the first six months of 1926. Carried.

2. Moved by Dr. Rogers, seconded by Drs. Smith and Redelings, that the Council approve the appropriation made by the House of Delegates of \$500 to the Committee on Cancer. Further, that the secretary be in-

structed to secure from the State Board of Health, if possible, such an appropriation as is necessary to complete the work in mind. Carried.

3. The secretary explained a condition that had arisen as result of the _____ Company failing to use their exhibit space, although they had signed a contract for such space and had been reminded of the meeting by mail and wire. Moved by Dr. Rogers, seconded by Dr. Redelings, that the secretary be instructed to advise the company that under the conditions the Council felt that they had forfeited special consideration, and that they would be held to the contract.

4. Moved by Dr. Smith, seconded by Dr. Dodd, that the secretary of the Society take charge of the special view boxes constructed at State Society expense for the exhibit of the Radiological Section. Carried.

5. Moved by Dr. Redelings, seconded by Dr. Rogers, that the president of the Society be instructed to advise the Governor and the Board of Regents of the University as to the consensus of opinion of the Council on matters of policy relating to the Medical School of the University of Wisconsin. The Council adjourned at 2:30 p. m. to the following day.

FOURTH MEETING

The Council met pursuant to constitution at the Auditorium, 1:30 p. m., Friday, September 18th. There being no further business to transact the Council adjourned sine die.

J. G. Crownhart,
Secretary.

Record of Attendance, House of Delegates

There were three sessions of the House. Attendance, as compiled by registration slips, is indicated by numeral showing session or sessions attended.

SOCIETY	DELEGATES	ALTERNATES
Ashland-B-I.....	J. M. Dodd, Ashland, 1, 2, 3.....	M. S. Hosmer, Ashland.
Barron-P-W-S-B.....	D. L. Dawson, Rice Lake, 1, 2, 3.....	H. M. Coleman, Barron.
Brown-Kewaunee.....	Eugene Knox, Green Bay, 1.....	S. F. Rudolf, Green Bay.
Calumet.....	J. W. Goggins, Chilton.....	I. N. McComb, Brillion.
Chippewa.....	E. P. Ellenson, Chippewa Falls.....	L. A. Larsen, Colfax, 1.
Clark.....	H. H. Christofferson, Colby.....	F. D. Jackey, Thorp.
Columbia.....	A. F. Schmeling, Columbus, 1, 2, 3.....	H. E. Gillette, Pardeeville.
Crawford.....	A. J. McDowell, Soldiers Grove, 1, 2, 3.....	C. A. Armstrong, Prairie du Chien.
Dane.....	H. P. Greeley, Madison, 1, 2.....	E. V. Brumbaugh, Madison.
	W. H. Sheldon, Madison, 2, 3.....	Ira Sisk, Madison.
Dodge.....	A. E. Bachhuber, Mayville.....	E. S. Elliott, Fox Lake.
Door.....		
Douglas.....	T. H. Shastid, Superior.....	John Baird, Superior.
Eau Claire & Associated Counties.....	J. C. Baird, Eau Claire, 1, 2.....	H. M. Stang, Eau Claire.
	F. E. Butler, Menomonie.....	
Fond du Lac.....	D. N. Walters, Fond du Lac, 1.....	A. C. Dana, Fond du Lac.
Grant.....	M. A. Bailey, Fennimore.....	J. C. Doolittle, Lancaster.
Green.....	W. G. Bear, Monroe.....	J. F. Mauermann, Monroe, 1, 2, 3.
Green Lake-W.A.....	W. E. Buckley, Redgranite.....	Orvil O'Neil, Ripon, 1, 2, 3.
Iowa.....		
Jefferson.....	H. O. Caswell, Ft. Atkinson, 1.....	W. S. Waite, Watertown.
Juneau.....	C. C. Vogel, Elroy.....	
Kenosha.....	G. W. McCarthy, Kenosha.....	J. F. Hastings, Kenosha, 1.
La Crosse.....	W. E. Bannen, La Crosse, 1, 2.....	E. Smedal, La Crosse.
LaFayette.....	H. O. Shockley, Darlington.....	H. E. Scott, Argyle.
Langlade.....	J. C. Wright, Antigo, 1, 2, 3.....	G. E. Moore, Antigo.
Lincoln.....	W. H. Bayer, Merrill, 1, 2, 3.....	G. Baker, Tomahawk.
Manitowoc.....	J. M. Kelley, Cato, 1.....	E. G. Festerling, Reedsville.

Marathon.....	L. E. Spencer, Wausau, 1.....	A. B. Rosenberry, Wausau.
Marinette-Florence.....	A. T. Nadeau, Marinette.....	J. W. Boren, Marinette.
Milwaukee.....	J. W. Hansen, 521 Grand Ave., 1.....	P. Currer, 2118 North Ave.
	M. L. Henderson, Wells Bldg., 1.....	C. Echols, Majestic Bldg.
	S. Higgins, Wells Bldg., 1, 2.....	G. J. Kaumheimer, 987 2nd St., 1, 2.
	F. McMahon, 120 Wisconsin St., 1.....	G. W. Neilson, 774 3rd St.
	C. Morter, 230 Grand Ave.....	F. Peterson, Wauwatosa, 1.
	F. Pfister, Majestic Bldg., 1.....	H. W. Powers, 770 39th St., 1, 2, 3.
	J. Powers, Majestic Bldg., 1, 3.....	R. Sproule, 141 Wisconsin St., 2.
	J. J. Seelman, Iron Blk., 2.....	R. G. Washburn, Goldsmith, Bldg.
	F. Thompson, 425 E. Water St., 1, 2.....	W. V. Nelson, 149 Lincoln Ave.
Monroe.....		
Oconto.....		
Oneida-F-V.....	I. E. Schiek, Rhinelander.....	
Outagamie.....	M. J. Sandborn, Appleton, 1, 2, 3.....	E. F. McGrath, Appleton.
Pierce.....	G. M. Dill, Prescott.....	R. Cairns, River Falls.
Portage.....	E. P. Crosby, Stevens Point.....	D. S. Rice, Stevens Point.
Price-Taylor.....	E. A. Riley, Park Falls.....	J. T. Speck, Chicago, Ill.
Racine.....	G. W. Nott, Racine, 1, 2.....	C. O. Schaefer, Racine.
Richland.....	G. Parke, Viola, 3.....	W. R. Coumbe, Richland Center.
Rock.....	W. A. Munn, Janesville.....	P. W. Fox, Beloit.
	T. W. Nuzum, Janesville, 1, 2.....	W. J. Allen, Beloit.
Rusk.....	H. C. Johnson, Bruce, 1, 2, 3.....	J. C. Baker, Hawkins.
Sauk.....	H. J. Irwin, Baraboo.....	E. McGrath, Baraboo.
Shawano.....	A. J. Gates, Tigerton, 1, 2, 3.....	C. E. Stubenvoll, Shawano.
Sheboygan.....	O. A. Fiedler, Sheboygan, 1, 2.....	A. Knauf, Sheboygan.
St. Croix.....	O. H. Epley, New Richmond, 2.....	F. S. Wade, New Richmond.
Trempealeau-J-B.....	C. F. Peterson, Independence, 1, 2, 3.....	H. A. Jegi, Galesville.
Vernon.....	W. M. Trowbridge, Viroqua.....	H. J. Suttle, Viroqua.
Walworth.....	E. J. Fucik, Williams Bay, 1, 2.....	M. V. DeWire, Sharon.
Washington-Ozaukee.....	H. M. Lynch, Allenton, 1.....	H. Albers, Allenton.
Waukesha.....	A. W. Rogers, Oconomowoc, 1, 2.....	U. J. Tibbitts, Waukesha.
Waupaca.....	T. E. Loope, Iola, 1, 2.....	F. E. Chandler, Waupaca, 1, 2, 3.
Winnebago.....	J. M. Hogan, Oshkosh, 2, 3.....	J. W. Lockhart, Oshkosh.
Wood.....	K. W. Doege, Marshfield, 1.....	W. G. Merrill, Wisconsin Rapids.

OFFICERS

President—Wilson Cunningham, Platteville, 1, 2, 3.
 1st Vice-President—J. Gurney Taylor, Milwaukee.
 2nd Vice-President—H. A. Jegi, Galesville.
 3rd Vice-President—Howard Curl, Sheboygan, 1.
 Treasurer—Rock Sleyster, Wauwatosa, 1, 2, 3.
 Councilors:

- 1st District—A. W. Rogers, Oconomowoc, 1, 2.
- 2nd District—G. Windesheim, Kenosha, 1, 2.
- 3rd District—C. A. Harper, Madison, 1.
- 4th District—W. Cunningham, Platteville, 1, 2, 3.
- 5th District—O. B. Bock, Sheboygan, 2.
- 6th District—F. G. Connell, Oshkosh, 1, 2.
- 7th District—Edward Evans, La Crosse, 1, 2.
- 8th District—T. J. Redelings, Marinette, 1, 2, 3.
- 9th District—Joseph Smith, Wausau, 1, 2, 3.
- 10th District—R. E. Mitchell, Eau Claire, 1, 2, 3.

11th District—J. M. Dodd, Ashland, 1, 2, 3.

12th District—Hoyt E. Dearholt, Milwaukee, 1, 2, 3.

ADDITIONAL ATTENDANCE

First Session: N. P. Anderson, La Crosse; C. R. Bardeen, Madison; H. M. Brown, Milwaukee; Elizabeth Comstock, Arcadia; K. H. Doege, Marshfield; W. E. Fairfield, Green Bay; L. F. Jermain, Milwaukee; F. R. Krembs, Stevens Point; Oscar Lotz, Milwaukee; J. P. McMahon, Milwaukee, and A. J. Patek, Milwaukee.

Second Session: C. R. Bardeen, Madison; F. V. Cargill, Hygeia, Chicago; Carl Henry Davis, Milwaukee; S. S. Hall, Minneapolis; G. W. Henika, Madison; L. F. Jermain, Milwaukee; S. O. Lund, Cumberland; J. P. McMahon, Milwaukee; W. H. Neumann, Sheboygan; L. H. Pelton, Ripon; George Saunders, Superior; G. E. Seaman, Milwaukee, and W. D. Stovall, Madison.

Third Session: P. W. Leitzell, Benton, and F. C. Warnshuis, Grand Rapids, Mich.

INSTITUTE CHANGES ADDRESS

The Wisconsin Psychiatric Institute is now situated at the University of Wisconsin, Madison. All specimens for Wassermann examination, all specimens of cerebro-spinal fluid and blood specimens for chemical examination should be addressed to the Wisconsin Psychiatric Institute, University of Wisconsin, Madison, instead of addressing them at Mendota, the former location.

Containers that are now sent out from the Institute are labeled with the correct return address. Dr. W. F. Lorenz, Director of the Institute, calls attention to the fact, however, that old containers that may be in the hands of our members are labeled with the return address to Mendota. This should be corrected at once in order to avoid delay in the mails or possibility of specimens being lost.

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 Devine, H. A., Fond du Lac.
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 Eisenberg, P. J., Milwaukee.
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 Frenzel, W. C., Wausau.
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 Frey, P. G., Milwaukee.
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 Gallogly, A. D., Clayton.
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 Gates, Eugene, Two Rivers.
 Gaunt, P. F., Milwaukee.
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 Gendron, A. E., River Falls.
 Genter, A. E., Sheboygan.
 Gephart, C. H., Kenosha.
 Gessner, F. C., Oconomowoc.
 Geyer, C. W., Milwaukee.
 Giesen, C. W., Superior.
 Gifford, H. B., Juda.

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 Godfrey, Rush, Lancaster.
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 Goggins, R. J., Oconto Falls.
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 Griswold, C. M., Clintonville.
 Griswold, F. L., Mazomanie.
 Griswold, G. W., Alma Center.
 Grob, A. R. F., Milwaukee.
 Grosskopf, E. C., Milwaukee.
 Grotjan, Wm. F., Milwaukee.
 Grundt, Wm. E., Superior.
 Grove, Wm. E., Milwaukee.
 Grover, F. L., Wauwatosa.
 Groves, R. J., Lodi.
 Gudex, V. A., Eau Claire.
 Guilford, H. M., Madison.
 Guilfoyle, J. P., Evansville.
 Gundersen, A., La Crosse.
 Gundersen, C. A. S., Madison.
 Gundersen, G., La Crosse.
 Gundersen, S. B., La Crosse.
 Gunther, Emil, Sheboygan.
 Gunther, Otto, Sheboygan.
 Gunther, T. J., Sheboygan.
 Gunther, Wm. H., Sheboygan.
 Gutsch, O. J., Sheboygan.
 Guttman, Paul, Cato.
 Guy, J. E., Milwaukee.
 Guyton, E. A., Eau Claire.
 Habeck, E. A., Milwaukee.
 Haberland, E. J., Milwaukee.
 Habbegger, C. J., Watertown.
 Hackett, J. H., Milwaukee.
 Haddow, N. W., Chippewa Falls.
 Hadley, D. A., Oconomowoc.
 Haessler, F. H., Milwaukee.
 Hafemeister, E. F., Waupaca.
 Hager, Benj. H., Madison.
 Hagerman, F. H., Milwaukee.
 Hagerup, T. A., Dodgeville.
 Haight, A. L., Crystal Falls, Mich.
 Hake, C. B., Milwaukee.
 Halgren, J. A., Menomonie.
 Hall, Earle H., Green Bay.
 Hall, H. H., Webster.
 Hall, R. M., Milwaukee.
 Halsey, R. C., Lake Geneva.
 Halsey, W. H., Milwaukee.
 Hambley, T. J., Hurlley.
 Hamilton, D. B., Dodgeville.
 Hammond, A. W., Beaver Dam.
 Hammond, F. W., Manitowoc.
 Hammond, Reginald, Manitowoc.
 Haney, F. C., Watertown.
 Hanko, J. E., Loganville.
 Hankwitz, P. G., Milwaukee.
 Hannen, P. H., Milwaukee.
 Hansberry, J. S., Wonewoc.
 Hansberry, P. H., Hillsboro.
 Hansen, John, Glenbluh.
 Hansen, J. W., Milwaukee.
 Hansen, R. T., Wauwatosa.
 Hanson, L. E., Holmen.
 Hanson, W. C., Racine.
 Harder, H., Milwaukee.
 Hardgrove, J. H., Eden.
 Hardy, C. F., Milwaukee.
 Hargarten, L. J., Milwaukee.
 Harkness, G., Waukesha.
 Harlow, G. A., Milwaukee.
 Harper, C. A., Madison.
 Harper, Glenn C., Durand.
 Harrington, T. L., Milwaukee.
 Harris, C. F., Bayfield.
 Harris, F. M., Green Bay.
 Harter, A. F., Wausau.
 Hartman, R. C., Janesville.
 Hurvey, J. R., Footville.
 Hastings, J. F., Kenosha.
 Hastings, T. R., Reedsburg.
 Hathaway, G. J., Superior.
 Hatteberg, C. B., Chippewa Falls.
 Haubrick, H. J., Oshkosh.
 Haushalter, H. P., Milwaukee.
 Hausmann, N. E., Kewaskum.
 Haven, W. S., Racine.
 Havens, F. Z., Waupun.
 Hawkins, H. M., Milwaukee.
 Hawkins, T. R., Cameron.
 Hayes, D. J., Milwaukee.
 Hayes, E. P., Eau Claire.
 Hayes, E. S., Eau Claire.
 Hayman, C. S., Boscobel.
 Hayman, L. H., Pasadena, Cal.
 Hayward, J. C., Marshfield.
 Head, L. R., Madison.
 Hecker, Wm., Beloit.
 Heedblom, C. A., Madison.
 Heeb, H. J., Milwaukee.
 Heffron, J. J., Milwaukee.
 Heegner, G. T., Appleton.
 Heiden, H., Sheboygan.
 Heidner, A. H., West Bend.
 Heising, A. F., Menomonie.
 Helgeson, E. J., Evansville.
 Helm, A. C., Beloit.
 Helm, H. M., Beloit.
 Helz, J. W., Fond du Lac.
 Henningsen, T. C., Racine.
 Henderson, M. L., Milwaukee.
 Hendrickson, H., Green Bay.
 Henes, Edwin, Jr., Milwaukee.
 Henika, G. W., Madison.
 Henke, W. A., La Crosse.
 Henken, J. F., Racine.
 Henney, C. W., Portage.
 Henriksen, J. A., Larsen.
 Henske, W. C., Chippewa Falls.
 Heraty, J. A., Milwaukee.
 Heraty, J. E., La Crosse.
 Herbert, R. H., La Crosse.
 Hernandez, J. A., Green Bay.
 Herner, W. L., Milwaukee.
 Herrick, E. L., Kenosha.
 Herron, A. L., Milwaukee.
 Herron, R. A., Milwaukee.
 Hertzman, C. O., Ashland.
 Heicks, L. N., Burlington.
 Higgins, E. G., Melrose.
 Higgins, S. G., Milwaukee.
 Hildebrand, G. J., Sheboygan.
 Hill, B. S., Kenosha.
 Hill, W. B., Milwaukee.
 Hilliard, H. G., Minong.
 Hinckley, H. G., Merrill.
 Hines, L. L., Rockbridge.
 Hipke, G. A., Milwaukee.
 Hipke, L. W., Milwaukee.
 Hipke, William, Marshfield.
 Hirschboeck, J. G., Forestville.
 Hitz, H. B., Milwaukee.
 Hodges, F. J., Madison.
 Hodges, F. L., Monroe.
 Hodgson, A. J., Waukesha.
 Hoermann, B. A., Milwaukee.
 Hoermann, R. B., Milwaukee.
 Hoelsley, H. F., Shullsburg.
 Hoffman, E. E., Sharon.
 Hoffman, G. H., West Allis.
 Hoffman, J. G., Hartford.
 Hoffman, Leo, 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.
 Holmes, Benj. H., Racine.
 Holtz, H. M., Beaver Dam.
 Holtz, A. P., Seymour.
 Hood, A. J., Milwaukee.
 Horn, A. S., Stoughton.
 Hornswell, U. M., Wausaukee.

- Hosmer, M. S., Ashland.
 Houck, Mary P., La Crosse.
 Hougden, Edward, Wisconsin Rapids.
 Hovde, A. G., Hollywood, Calif.
 Howard, M. Q., Wauwatosa.
 Howard, T. J., Milwaukee.
 Howe, H. W., Sheboygan.
 Howell, E. C., Fennimore.
 Howell, J. A., Waukesha.
 Howison, N. L., Menomonie.
 Hoyer, A. A., Beaver Dam.
 Hoyer, G. C., Appleton.
 Hoyer, G. H., Beaver Dam.
 Hoyer, H. A., Milwaukee.
 Hoyme, G., Eau Claire.
 Hübenthal, J. C., Belmont.
 Huber, G. W., Minocqua.
 Huber, H. H., Milwaukee.
 Hudek, D. F., Neshkora.
 Hudson, R. J., Prairie du Sac.
 Huenekens, J. H., Milwaukee.
 Huff, F. C., Sturgeon Bay.
 Hughes, J. R., Dodgeville.
 Hingo, D. G., Oshkosh.
 Hime, W. W., Milwaukee.
 Himmel, W. J., Ablesmans.
 Hint, F. O., Fall River.
 Hurd, H. H., Chippewa Falls.
 Hurth, O. J., Cedarburg.
 Hypes, P. E., Three Lakes.
 Ide, C. E., Milwaukee.
 Ingersoll, R. S., Madison.
 Irvine, W. J., Manawa.
 Irwin, G. H., Lodi.
 Irwin, H. J., Baraboo.
 Ishmael, O. E., Madison.
 Ison, G. W., Crandon.
 Iverson, M., Stoughton.
 Jaeky, F. D., Thorp.
 Jackson, Arnold, Madison.
 Jackson, Edward, Milwaukee.
 Jackson, F. A., Eldorado.
 Jackson, J. A., Mosinee.
 Jackson, J. A., Jr., Madison.
 Jackson, R. H., Madison.
 Jacobs, E. C., Durand.
 Jacobs, S. A., New York City.
 Jacobson, E. B., Milwaukee.
 James, A. W., Muscoda.
 Jamieson, George, Lone Rock.
 Jamieson, R. D., La Crosse.
 Janney, F. R., Waukesha.
 Jeffers, Dean, West Salem.
 Jegli, H. A., Galesville.
 Jensen, A. B., Menasha.
 Jermain, H. F., Milwaukee.
 Jermain, L. F., Milwaukee.
 Jermain, Wm. M., Milwaukee.
 Jobse, W. P., Milwaukee.
 Johnson, A. W., Hales Corners.
 Johnson, B. F., Mondovi.
 Johnson, C. G., Milwaukee.
 Johnson, Fred, Eau Claire.
 Johnson, F. G., Iron River.
 Johnson, H. B., Tomah.
 Johnson, H. C., Madison.
 Johnson, H. C., Bruce.
 Johnson, J. E., Coon Valley.
 Johnson, J. M., Ripon.
 Johnson, L. M., Melvin Village, N. H.
 Johnston, G. B., Abbotsford.
 Johnston, H. E., Oshkosh.
 Johnston, W. M., Johnson Creek.
 Jones, Asa N., Reedsburg.
 Jones, D. T., Wausau.
 Jones, E. H., Weyauwega.
 Jones, G. S., Wauwatosa.
 Jones, M. L., Wausau.
 Jones, R. W., Wausau.
 Jones, Susan, Racine.
 Jones, W. J., La Crosse.
 Jorgensen, P. P. M., Kenosha.
 Juckem, G. J., Howards Grove.
 Judge, T. A., Milwaukee.
 Juergens, L. W., Milwaukee.
 Juers, R. H., Birnamwood.
 Junck, J. A., Sheboygan.
 Jurs, G. J., Milwaukee.
 Kahn, Joseph, Milwaukee.
 Kamm, A. N., Ashland.
 Kane, J. J., Prairie du Chien.
 Karnopp, G. L., Wautoma.
 Kasten, H. E., Beloit.
 Kastner, A. L., Milwaukee.
 Katz, H. M., Cedarburg.
 Kaunheimer, G. J., Milwaukee.
 Kauth, Phillip, Slinger.
 Kay, H. M., Madison.
 Kaysen, Ralph, Milwaukee.
 Kearns, W. M., Milwaukee.
 Keenan, Harry A., Stoughton.
 Keenan, T. P., Lake Geneva.
 Keithley, J. A., Palmyra.

- Keithley, J. W., Beloit.
 Keland, H. B., Racine.
 Kelley, F. L., Merrill.
 Kelley, G. P., Milwaukee.
 Kelley, J. A., Chippewa Falls.
 Kelley, John M., Cato.
 Kellner, V. V., Maribel.
 Kelly, D. M., Baraboo.
 Kelly, W. W., Green Bay.
 Kemper, W. G., Manitowoc.
 Kennedy, F. H., Iron Ridge.
 Kennedy, W. R., Milwaukee.
 Kenney, G. F., Milwaukee.
 Kenney, R. L., Mendota.
 Kerscher, E. J., Casco.
 Kersten, N. M., Depere.
 Keskey, George, Kenosha.
 Kettlehut, E. J., Milwaukee.
 Keyes, T. B., Chicago, Ill.
 Kiefer, J. G., Milwaukee.
 Kiley, Wm. E., Milwaukee.
 King, Jos. M., Milwaukee.
 Kinsman, F. C., Eau Claire.
 Kispert, R. W., Green Bay.
 Kissinger, C. A., Milwaukee.
 Kissling, A. C., Milwaukee.
 Klein, J. T., Milwaukee.
 Kleinboehl, J. W., Milwaukee.
 Kleinhans, M. A., Milwaukee.
 Kleinschmidt, H. W., Oshkosh.
 Kliese, L. A., Milwaukee.
 Knapp, 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.
 Knox, E. S., Green Bay.
 Knutson, Oscar, Osseo.
 Koch, H. C., Whitehall.
 Koch, M. J., Milwaukee.
 Koch, V. W., Janesville.
 Koehler, A. G., Oshkosh.
 Koehler, J. P., Milwaukee.
 Konop, E. J., Sawyer.
 Korhals, F. J., Milwaukee.
 Kosanke, F. E., Watertown.
 Kovats, F. C., Milwaukee.
 Kradwell, W. T., Wauwatosa.
 Kraft, Sigfried, Sheboygan.
 Krahn, A. J., Beaver Dam.
 Krahn, G. W., Oconto Falls.
 Kratsch, A. W., Milwaukee.
 Krant, Elgie, Lancaster.
 Krembs, F. R., Stevens Point.
 Kremers, Alex., Milwaukee.
 Kreutzer, A. G., Milwaukee.
 Kristjanson, H. T., Milwaukee.
 Kriz, G. H., Milwaukee.
 Krohn, H. C., New Holstein.
 Krueger, Bernard, Cudahy.
 Krueger, W. F., Milwaukee.
 Krygiar, A. A., Milwaukee.
 Krzysko, S. L., Milwaukee.
 Kuhn, H. J., Milwaukee.
 Kulig, A. H., Turtle Lake.
 Kunny, Bartholomew, Baldwin.
 Kyes, S. M., Oshkosh.
 Kylo, A. L., Superior.
 Kylo, J. C., Superior.
 La Breck, F. A., Eau Claire.
 Lademann, O. E., Milwaukee.
 Ladewig, A. W., Milwaukee.
 Ladewig, Harry, Milwaukee.
 Ladwig, W. A., Wausau.
 Laird, J. J., Black Creek.
 Lalor, J. C., Sauk City.
 Lambeck, F. J., Milwaukee.
 Lambert, J. W., Antigo.
 Langenfeld, P. F., Theresa.
 Langjahr, A. R., Milwaukee.
 Langland, P., Milwaukee.
 Lansdowne, F. B., Kenosha.
 Larsen, G. A., Hayward.
 Larsen, L. A., Colfax.
 Lawler, C. F., Hilbert.
 Lawler, G. W., Sussex.
 Lawler, T. S., Milwaukee.
 Lawrence, G. H., Stevens Point.
 Layton, O. M., Fond du Lac.
 Leahy, J. D., Butternut.
 Leaper, W. E., Green Bay.
 Leasum, R. V., Osseo.
 Le Cron, W. L., Milwaukee.
 Lee, J. H., Madison.
 Lee, M. A., Superior.
 Leeson, Fred W., Beloit.
 Lehmann, F. W., Hartford.
 Lehnkering, C. F., Darlington.
 Leicht, Philip, Lake Mills.
 Leitch, G. W., Milwaukee.
 Leitzell, P. W., Benton.
 Leland, A. M., Whitewater.
 Lemmel, J. T., Albany.
 Lemmer, G. N., Spooner.
 Liefert, Wm. C., Milwaukee.
 Lenfestey, J. P., Depere.
 Leonard, C. W., Fond du Lac.
 Lettenberger, Jos., Milwaukee.
 Levitas, I. E., Green Bay.
 Lewis, C. H., Milwaukee.
 Lewis, Marion, Milwaukee.
 Lid, T. A., Marinette.
 Lillie, O. R., Milwaukee.
 Lindores, J. D., Stevens Point.
 Lindsay, W. T., Madison.
 Linger, Earl A., Oconto.
 Linn, W. N., Oshkosh.
 Lintleman, F. R., Janesville.
 Lippitt, R. H., Milwaukee.
 Littig, L. V., Madison.
 Lobedan, E. T., Milwaukee.
 Lockhart, C. W., Mellen.
 Lockhart, J. W., Oshkosh.
 Loevenhart, A. S., Madison.
 Lohmiller, R. K., Superior.
 Longley, J. R., Fond du Lac.
 Loomis, E. A., Janesville.
 Loops, T. E., Iola.
 Looze, A. J., Superior.
 Looze, J. A., New Franken.
 Lorenz, W. F., Madison.
 Lotz, Oscar, Milwaukee.
 Loughlin, D. M., Milwaukee.
 Loughlin, T. F., Hartford.
 Loughnan, A. J., Oconomowoc.
 Love, I. B., Milwaukee.
 Lowe, J. W., Taylor.
 Lowe, R. C., Stevens Point.
 Ludden, H. D., Mineral Point.
 Lueck, G. W., La Crosse.
 Luhman, F. S., Manitowoc.
 Lumsden, Wm., Menomonie.
 Lund, S. O., Cumberland.
 Lundmark, L. M., Ladysmith.
 Lyman, J. V. R., Eau Claire.
 Lynch, D. W., West Bend.
 Lynch, Geo. V., Oshkosh.
 Lynch, H. M., Allenton.
 McArthur, D. S., La Crosse.
 McCabe, Harry, Milwaukee.
 McCabe, P. G., Fond du Lac.
 McCann, Edith, Milwaukee.
 McCarey, A. J., Green Bay.
 McCarty, E. O., Chippewa Falls.
 McCarthy, G. W., Kenosha.
 McCarthy, H. C., Richland Center.
 McClusky, O. W., Kenosha.
 McComb, I. N., Brillion.
 McCorkle, S. C., Milwaukee.
 McCormick, H., New Auburn.
 McCormick, T. F., Milwaukee.
 McCormick, Wm. C., Tomahawk.
 McCracken, J. O., Kenosha.
 McCracken, R. W., Union Grove.
 McDonald, C. F., 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.
 McGill, P. G., Superior.
 McGonigal, M., Loyal.
 McGovern, J. J., Milwaukee.
 McGrath, E. F., Appleton.
 McGrath, Edward, Baraboo.
 McGuinness, H. S., Athens.
 McGuire, Wm. H., Janesville.
 McHugh, E. T., Chippewa Falls.
 McIndoe, T. B., Rhinelander.
 McIntosh, R. L., Madison.
 McKillip, W. J., Milwaukee.
 McLaughlin, H. J., Bloomington.
 McLaughlin, W. J., Wrightstown.
 McLoone, J. E., La Crosse.
 McMahon, F. B., Milwaukee.
 McMahon, H. O., Milwaukee.
 McMahon, J. P., Milwaukee.
 McNaughton, W. T., Milwaukee.
 McNary, J. F., Milwaukee.
 McNevis, E. S., Green Bay.
 McNicholas, L. T., Racine.
 McRae, J. D., Chippewa Falls.
 Maas, W. C., Rio.
 Macaulay, E. M., Wausau.
 MacCollum, C. L. R., Manitowoc.
 MacCornack, E. A., Calico, Penn. S. A.
 MacCornack, R. L., Whitehall.
 MacDonald, W. H., Lake Geneva.
 MacGregor, S. A., Westfield.
 MacKechnie, R. S., Hillsboro.
 MacKedon, T. E., Milwaukee.
 MacKedon, W. L., Milwaukee.
 MacKinnon, G. E., Prentice.
 MacLachlan, W. G., MacFarland.
 MacLaren, J. B., Appleton.
 MacMillan, A. B., Chehalis, Wash.
 MacRae, M. F., Milwaukee.
 Mackoy, F. W., Milwaukee.
 Madison, J. D., Milwaukee.
 Machtle, E. W., Glencoe, Ill.
 Macrecklein, O. W. C., Milwaukee.
 Maes, C. G., Kimberly.
 Majerus, P. J., Ft. Atkinson.
 Malloy, T. E., Random Lake.
 Malone, F. A., Waterford.
 Malone, T. C., Milwaukee.
 Mark, F. B., Racine.
 Marks, J. B., Milwaukee.
 Markson, M. R., Milwaukee.
 Markson, S. M., Milwaukee.
 Marks, F. A., Stevens Point.
 Marsden, T. H., Fennimore.
 Marsh, H. E., Madison.
 Marsh, Jas. M., Elkhorn.
 Marshall, F. P., Fond du Lac.
 Marshall, V. F., Appleton.
 Martens, W. A., Milwaukee.
 Martin, H. G., Milwaukee.
 Mason, C. H., Superior.
 Mason, E. L., Eau Claire.
 Mason, V. A., Marshfield.
 Mast, B. W., La Crosse.
 Matthews, J. B., Milwaukee.
 Mauermann, J. F., Monroe.
 Maurer, A. A., New York City.
 Maurer, H. C., Beloit.
 May, J. V., Marinette.
 Meachem, J. G., Jr., Racine.
 Meachem, J. G., Sr., Racine.
 Meacher, B. C., Portage.
 Meade, F. S., Madison.
 Meanwell, W. W., Madison.
 Meany, J. E., Manitowoc.
 Meany, S. G., East Troy.
 Mehigan, D. D., Milwaukee.
 Meiklejohn, D. V., Fond du Lac.
 Melas, W. G., Beloit.
 Melster, W. H., Milwaukee.
 Mensing, Edmund, Milwaukee.
 Merrill, W. G., Wisconsin Rapids.
 Merten, A. N. E., Milwaukee.
 Merten, P. J., Milwaukee.
 Mertens, H. G., Bayfield.
 Messmer, Clemens, Milwaukee.
 Metcalf, G. S., Janesville.
 Meusel, Harry, Oshkosh.
 Meyers, J. M., Superior.
 Meyst, C. H., Milwaukee.
 Middleton, W. S., Madison.
 Mideffart, H. C., Eau Claire.
 Mieding, A. E., Milwaukee.
 Mielke, E. F., Appleton.
 Milbee, H. H., Marshfield.
 Millard, F. D., Milwaukee.
 Miller, C. D., Milwaukee.
 Miller, E. A., Chintonville.
 Miller, E. W., Milwaukee.
 Miller, H. C., Whitewater.
 Miller, Thos., Oconomowoc.
 Miller, W. J., La Valle.
 Miller, W. P., Milwaukee.
 Mills, N. P., Appleton.
 Miloslavich, E. L., Milwaukee.
 Minahan, J. J., Chilton.
 Minahan, J. R., Green Bay.
 Minahan, P. R., Green Bay.
 Minahan, R. E., Green Bay.
 Minshall, A. P., Viroqua.
 Mishoff, I. D., Milwaukee.
 Mitchell, E. J., Brodhead.
 Mitchell, F. W., Ogea.
 Mitchell, R. E., Eau Claire.
 Mitchell, R. S., Appleton.
 Mitchell, S. R., Milwaukee.
 Moe, F. C., Milwaukee.
 Moe, H. B., Blanchardville.
 Moller, J., Milwaukee.
 Mollinger, S. M., Milwaukee.
 Monroe, W. B., Monroe.
 Monstad, J. W., New London.
 Montgomery, A., Milwaukee.
 Montgomery, J. L., Seattle, Wash.
 Montgomery, R. B., Madison.
 Montgomery, R. C., Madison.
 Moore, G. E., Antigo.
 Moore, L. A., Monroe.
 Moore, W. N., Appleton.
 Moraux, Felix, Luxemburg.
 Morgenroth, H. W., Oshkosh.
 Moriarty, L. J., Two Rivers.
 Mork, Ole, Blair.

- Morley, F. E., Viroqua.
 Morris, E. K., Merrill.
 Morris, K., Merrill.
 Morris, R. C., Ft. Atkinson.
 Morris, S. I., Madison.
 Mortensen, O. N., Wisconsin Rapids.
 Morter, C. W., Milwaukee.
 Morter, R. E., Milwaukee.
 Morton, H. H., Cobb.
 Mowry, W. A., Madison.
 Muckerheide, A. J., Milwaukee.
 Mudroch, J. A., Columbus.
 Mueller, G. F. C., Milwaukee.
 Mueller, W. E., Green Bay.
 Mulvaney, F. M., Marion.
 Munkwitz, F. H., Milwaukee.
 Munn, W. A., Janesville.
 Murphy, E. R., Antigo.
 Murphy, F. D., Milwaukee.
 Murphy, G. F., Stratford.
 Murphy, S. W., Kenosha.
 Murphy, W. J., Milwaukee.
 Museus, H. B., Beach, North Dakota.
 Myers, C. E., North Freedom.
 Myers, E. A., Superior.
 Myers, I. A., Cottage Grove.
 Myrick, A. L., De Sota.
 Nadeau, A. T., Marinette.
 Nadeau, E. G., Green Bay.
 Nason, W. C., Ripon.
 Natvig, G. A., Prairie Farm.
 Nause, F. A., Sheboygan.
 Nauth, D. F., Kiel.
 Nedry, C. J., Chippewa Falls.
 Nee, Frank, Spring Green.
 Neff, E. E., Madison.
 Neidhold, C. D., Appleton.
 Neilson, G. W., Milwaukee.
 Neis, F. P., Thorp.
 Nelson, A. L., Racine.
 Nelson, A. N., Clear Lake.
 Nelson, J. D., Milwaukee.
 Nelson, N. O., Madison.
 Nelson, O. O., Madison.
 Nesbit, W. M., Madison.
 Neumann, Wm. H., Sheboygan.
 Newell, Frank, Burlington.
 Newell, G. W., Burlington.
 Newman, Robt., Chicago, Ill.
 Newton, J. E., Hudson.
 Nicely, W. E., Waukesha.
 Nichols, F. C., Wausau.
 Nichols, R. M., Sheboygan Falls.
 Nichols, W. T., Milwaukee.
 Nickels, A. C., Watertown.
 Niland, P. J., Milwaukee.
 Nixon, H. G. B., Hartland.
 Nixon, R. T. A., Brookfield.
 Noble, J. B., Waukesha.
 Noer, Julius, Berkeley, Calif.
 Noer, P. J., Wabeno.
 Nolte, L. G., Milwaukee.
 Notbohm, D. R., White Lake.
 Notbohm, W. R., Dousman.
 Nott, G. W., Racine.
 Nowack, L. H., Watertown.
 Noyes, G. B., Stone Lake.
 Nuzum, T. W., Janesville.
 Nystrum, Ray, Medford.
 O'Brien, H. N., Darien.
 O'Brien, J. M., Oregon.
 O'Brien, W. T., Mauston.
 O'Connell, D. C., Milwaukee.
 O'Connell, J., Watertown.
 O'Connell, J. E., Milwaukee.
 O'Connor, W. E., Ladysmith.
 O'Donovan, T. W., Milwaukee.
 O'Hara, J. J., Milwaukee.
 O'Leary, T. J., Superior.
 O'Neal, Orville, Ripon.
 Oakland, H. G., Milwaukee.
 Oatway, W. H., Waukesha.
 Oberembt, B., Milwaukee.
 Odell, L. E., Phillips.
 Ogden, H. V., Milwaukee.
 Ohswaldt, H. F., Oconto Falls.
 Oliver, T. J., Green Bay.
 Olmsted, A. O., Green Bay.
 Olson, A. L., Stoughton.
 Olson, Chresten, Racine.
 Olson, E. A., Osseo.
 Olson, H. J., Milwaukee.
 Olson, R. E., Milwaukee.
 Omsted, Nils, Stoughton.
 Orchard, H. J., Superior.
 Orton, Susanne, Darlington.
 Ostrander, A. J., Enderlin, N. D.
 Ott, H. A., Dale.
 Ottow, A. F., Beloit.
 Ouellette, C. J., Oconto.
 Overbaugh, J. H., Hartland.
 Overton, O. V., Janesville.
 Ovitiz, E. G., Laona.
 Owens, Wm. H., Milwaukee.
 Ozanne, I. E., Neenah.
 Ozanne, J. T., Oshkosh.
 Packard, C. D., Rhineland.
 Palmer, J. A., Arcadia.
 Palmer, Wm. H., Janesville.
 Palt, Joseph, Kenosha.
 Panetti, E. J., Milwaukee.
 Panetti, P. A., Hustisford.
 Parke, Geo., Viola.
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 Partridge, O. F., Mattoon.
 Paschen, J. G., Milwaukee.
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 Pearce, W. J., Dodgeville.
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 Pease, W. A., Jr., Rio.
 Peck, W. W., Darlington.
 Pederson, A. M., Waupaca.
 Peehn, F. G., Sturtevant.
 Pegram, Jas W., Milwaukee.
 Pelton, L. H., Waupaca.
 Pember, A. H., Janesville.
 Pember, J. E., Janesville.
 Perrin, G. H., Menomonee Falls.
 Perrin, H. E., Star Prairie.
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 Peterson, E. F., Wauwatosa.
 Peterson, G. E., Waukesha.
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 Pfeiffer, E. N., Milwaukee.
 Pfeiffer, E. C., Racine.
 Pfeiffer, F. J., New London.
 Pfeiffer, H. A., Milwaukee.
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 Pickering, C. R., Muscoda.
 Pierson, P. R., Readstown.
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 Pippin, B. I., Richland Center.
 Pirsch, Margaret, Kenosha.
 Pitz, M. N., Neenah.
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 Pleyte, A. A., Milwaukee.
 Plumlee, R. S., Brooklyn.
 Podlasky, H. B., Milwaukee.
 Pomainville, Frank, Wis. Rapids.
 Pomainville, Geo., Nekoosa.
 Pope, F. J., Racine.
 Pope, F. W., Racine.
 Poser, E. M., Columbus.
 Post, C. C., Barron.
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 Potter, R. P., Marshfield.
 Powell, J. J., Galesville.
 Powers, F. H., Columbus.
 Powers, H. W., Milwaukee.
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 Pretts, W. W., Platteville.
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 Sommers, J. C., Madison.
 Sonnenburg, C. N., Sheboygan.
 Sonnenburg, W. M., Sheboygan Falls.
 Sorenson, S., Racine.
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 Spaun, M. G., Beloit.
 Speck, J. T., Chicago, Ill.
 Spencer, C. F., Spokane, Wash.
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 Sperry, W. P., Phillips.
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 Squire, C. A., Sheboygan.
 Squire, T. E., Milwaukee.
 Stack, G. F., Independence.
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 Staehle, Max, Manitowoc.
 Stamm, L. P., Milwaukee.
 Stang, H. M., Eau Claire.
 Stannard, G. H., Sheboygan.
 Stanley, W. S., Milwaukee.
 Stark, R. M., Milwaukee.
 Starnes, Brand, New Lisbon.
 Stebbins, W. W., Madison.
 Steckbauer, J. W., Manitowoc.
 Steele, G. A., Oshkosh.
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 Stefanez, J. S., Milwaukee.
 Steffen, L. A., Antigo.
 Stein, J. F., Oshkosh.
 Stemper, I. G., Oconomowoc.
 Stephenson, W. L., Brodhead.
 Stevens, G. W., Milwaukee.
 Steves, B. J., Menomonie.
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 Stiennon, O. A., Green Bay.
 Siles, V. W., Sparta.
 Stimpson, Geo. C., Pine River.
 Stirn, F. J., Dubuque, Ia.
 Stirn, Wm., Milwaukee.
 Stockinger, R. E., Milwaukee.
 Stoddard, C. H., Milwaukee.
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 Stubenvoll, C. E., Shawano.
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 Suiter, F. C., La Crosse.
 Sullivan, A. G., Madison.
 Sullivan, E. S., Madison.
 Sure, J. H., Milwaukee.
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 Sutherland, C. H., Janesville.
 Sutherland, F. E., Janesville.
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 Swanson, A. J., Frederic.
 Swarthout, Edyth C., La Crosse.
 Swarthout, E. C., La Crosse.
 Swarthout, E. F., Kenosha.
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 Sykes, H. D., Milwaukee.
 Sylvester, Homer, Madison.
 Szlapka, T. L., Milwaukee.
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 Tanner, G. F., Turtle Lake.
 Tarter, J. W., Iron River.
 Tasche, C. T., Sheboygan.
 Tasche, J. T., Sheboygan.
 Taugher, A. J., Milwaukee.
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 Taylor, J. G., Milwaukee.
 Taylor, L. L., Waupun.
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 Vedder, J. B., Marshfield.
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 Vogel, C. C., Elroy.
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 Waters, Hugh, Nekeosa.
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 Werner, R. F., Eau Claire.
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POOR SURGICAL RISKS.

William Thalheimer, Milwaukee (Journal A. M. A., September 12, 1925), discusses some of the results obtained by laboratory investigations of several types of patients for whom the hazard of a major surgical operation is more serious than for the average patient. This discussion is of laboratory data, their significance and their indications for certain preoperative and postoperative treatment of these patients. Thalheimer pleads not only for the study of these patients with laboratory methods, but especially for the interpretation of laboratory findings by a person who is capable of interpreting them, be he a surgeon, an internist or a laboratory worker. Probably the factors which influence the postoperative course of patients more than any others are those which have to do with renal function. Although an increased blood pressure does not necessarily indicate organic renal disease, it will be found that most patients with this condition show subnormal renal function after operation. Chemical examination of the blood is most important, for evidences of retention of nonprotein nitrogenous substances (urea, creatinin, etc.) are of great significance. Furthermore, the determination of the quantitative secretion of urea is not given the attention it deserves. Many of these patients who have only a slight degree of anemia, such as would cause no concern

in the average patient, should receive transfusions both before and after operation. Next in importance to these factors is the furnishing of adequate carbohydrate nourishment to the patient. This can be accomplished safely by the intravenous route. Instead of the usual physiologic sodium chlorid solution, Thalheimer gives 100 gm. of dextrose a day in the form of either a 5 or a 10 per cent solution. Sometimes twice this amount is given. By this means, the most important energy-giving constituent of food is supplied and is delivered into the circulation, where it is carried immediately to all the cells for either use or storage. One group of patients present themselves for operation after they have been vomiting for a longer or shorter period of time. These patients are usually in extremely poor condition and have either an acidosis or an alkalosis. The presence of acetone and diacetic acid in the urine (ketonuria) usually indicates an acidosis, but these substances may be present during alkalosis. Appropriate treatment must be given. Impaired physiologic functions of patients demand as much consideration and treatment as their organic diseases. This can be accomplished by developing a physiologic point of view, and using physiologic methods of study and treatment. Finally, this will be possible only by the expenditure of intelligent energy, and when surgeons are sufficiently far sighted to secure at all times the close cooperation with them of internists, laboratory workers, interns and nurses.

THE WISCONSIN MEDICAL JOURNAL

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SERVICE AVAILABLE

There is listed the following definite services that are available to our readers—the members of the State Medical Society of Wisconsin. If you have a need not covered here address the Secretary, Mr. J. G. Crownhart, 558 Jefferson Street, Milwaukee. "Let George do it."

FOR THE MEMBER

1. *Package Libraries* are now available on Cancer, Schick Test, Vaccination, Periodical, Physical Examinations, Insulin, Fractures of Long Bone, Protein Treatment, Control of Communicable Diseases, Goiter, Digitalis, Pneumonia, Diseases of the Knee, Encephalitis, Asthma, Epilepsy, Meningitis and Scarlet Fever. Address Package Library Department, Extension Division, University of Wisconsin, Madison. Material on other subjects compiled upon request.

2. *Medical Books* will be loaned by the Medical Library, University of Wisconsin, Madison, Mr. Walter Smith, Librarian. Order through local library where possible.

3. *Physicians' Exchange Column* is open to all members without charge.

4. *New Scientific Publications* listed in the Book Review columns of this Journal are available for inspection by the members. They are in the Medical Library, University of Wisconsin, Madison. Place your order through your local library where possible or address Mr. Walter Smith, Librarian.

5. *State Laws* and departmental rulings can be secured through the Secretary's office.

6. *Legal Advice* upon questions pertaining to the practice of medicine will be given in so far as is possible. A complete statement of the question or facts must be forwarded.

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FOR THE COUNTY SOCIETY

1. *Program Material.* Pursuant to authorization by the 1924 House of Delegates the Secretary is arranging to make program material available without cost. The following can now be secured:

A. Departmental Officers of the State Board of Health. Address Dr. C. A. Harper, State Health Officer, State Capitol, Madison, Wis.

B. Clinicians of the Wisconsin Anti-Tuberculosis Association when in vicinity. Address Clinic Dept., W. A. T. A., 558 Jefferson Street, Milwaukee.

C. Councilors and Officers of the State Society. Address the individual.

2. *Annual Statements.* Uniform annual statements can be had without cost. Address the Secretary, advising number desired.

EDITORIALS

RETROSPECTIVE AND PROSPECTIVE

THE year now nearing its end has been in many ways a notable one in the history of the Wisconsin State Medical Society. It is fitting that we should at this time recast our accomplishments in the year now closing and endeavor to forecast the problems the coming year will bring us.

In the year now passing we have seen the machinery set up for putting into practice the basic science law for which Dr. O. B. Bock and the other members of the Committee on Public Policy and Legislation have labored long and faithfully. Under the leadership of President Cunningham, the influence of the society has been greatly extended and the society has been safely guided past many rocks and pitfalls by his wise counsel and advice. The organization work has gone forward and its influence has been extended to the county societies by the energetic and faithful efforts of our Executive Secretary. The program presented at the last meeting of the society was most unique because of the carefully worked out plan upon which it was based. For this, the members owe a debt of gratitude to Drs. Yates and Davis and the other members of the Program Committee.

The passing year has seen much that is constructive and far reaching accomplished. There are still many problems pressing for solution in the future. The laity have become deeply interested in many of the problems of public health and our profession must assume and maintain leadership in these movements or submit to the humiliation of trailing behind or being led. The movement for periodic examination of apparently healthy persons is one of the problems for which the near future must bring a solution. It will be necessary for the profession to organize definite methods of procedure for carrying out this work uniformly and thoroughly if results are to be of any value.

It will be a sad day for the medical profession and the people as well if we allow leadership in medical matters to pass to the laity and to lay organizations. It is our duty at this present time to connect up our efforts in our separate communities with the efforts of the laity and endeavor to

maintain in all health matters the leadership which should belong to organized medicine.

—Joseph F. Smith.

OUR REFERENCE NUMBER

IN this issue of the Journal there are published brief, but withal complete, summaries of the important federal and state laws and rulings that affect physicians in the practice of medicine. The compilation of this material should make this number an especially valuable one for ready reference. Every effort has been made to the end that these summaries shall be accurate but as suggested elsewhere, should important questions arise, the members should not be content with the summary but should secure the complete law which may be obtained from the secretary's office.

In the compilation of this material the Journal expresses its gratitude to the following officials who made the issue possible: Mr. Don Martin, Executive Secretary, Ohio State Medical Association; Hon. A. H. Wilkinson, Collector of Internal Revenue, Milwaukee; Mr. L. W. Bridgman, Wisconsin State Board of Health; Hon. Charles D. Rosa, Wisconsin Tax Commission, and to Mr. Herman Satchjen, State Prohibition Commissioner.

DIAGNOSTIC YARDSTICK

TWENTY-FIVE years ago in a representative medical school ten to twenty times as many hours were devoted to the study of typhoid fever as were allocated to pulmonary tuberculosis. As a result the graduate of those days was almost certain to leave his training field with a mental astigmatism which gave him a most distorted image of the situation with which he was confronted in his workaday world.

It was the idea of the medical teachers, a quarter of a century back, that if a student were given a working ability to differentiate typhoid fever from other acute infectious diseases, with which it might be confounded, he would be *ipso facto*, a reasonably good diagnostician.

Recently the trend in medical education and practice has been rather more toward the study and treatment of the chronic disorders of mankind. It is high time that this should be so.

Acute, infectious diseases are self-limited. Their treatment, therefore, "expectant" and more a matter of skillful nursing than anything else.

The proper handling of the chronic cases offers really far more interesting scientific problems than do the acute processes of a non-surgical nature. What the patient may do, or fail to do, in the course of months or years is profoundly of more importance than it is in an acute disease, the very prostrating influence of which is to promote healing rest.

Today, tuberculosis has taken the place of typhoid as the yardstick for measurement of ability in medical diagnosis. The physician who can differentiate a truly incipient case from other insidious disorders may be accounted an able man in his profession.

Inability in some cases, even with every possible facility, however, cannot be reckoned upon to establish incompetency. Krause has recently uttered the dictum that eighty per cent of all cases should be diagnosed with reasonable facility by ordinarily good physicians. Ten per cent require highly specialized skill. The remaining ten per cent cases present signs which will lead to disputes among equally endowed and equally accredited diagnosticians.

As time goes on, it will be increasingly disgraceful for any respectable physician to be caught overlooking the signs—or the suspicion at least—of tuberculosis.

H. E. D.

THE POTENTIAL DANGER OF CONGENITAL CARDIAC DEFECTS

SINCE Osler's Classic description of chronic infective endocarditis and Libman's demonstration of the role of the anhemolytic streptococcus (*S. viridans*) in this disease to which he gave the name sub-acute bacterial endocarditis, there has been considerable study of the heart in an attempt to determine why bacteria localize on certain valves and in certain rather unusual places. The fact that the blood is not always bacteria-free has long been known. Almost any serious local infection produces conditions which disseminate bacteria into the blood-stream. It is then not so surprising that we see more frequently than we like to see, infections of the endothelial lining of the heart.

In a recent article Maude Abbott¹ summarizes

our knowledge of the Incidence of Bacterial Inflammatory Processes in Cardio-Vascular Defects and on Malformed Semilunar Cusps. She calls attention to the two types of congenital cardiac disease, the non-cyanotic and the cyanotic. The former composes the large group of more or less minor congenital defects which are not incompatible with relatively long and useful lives. These are subdivided into (a) cases without abnormal communication of streams, chief of which are fused semilunar cusps, subaortic stenosis, coarctation of aorta, and (b) cases with arterial-venous shunt and terminal cyanoses of which the most important are defects at lower part of auricular septum, defects at base of ventricular septum and patent ductus arteriosus. The cyanotic group with permanent venous-arterial shunt include the cases of pulmonary stenosis, tricuspid atresia, transposition of great trunks and other defects more or less incompatible with life.

With the cyanotic group we have little to do as the victims of this group of congenital defects live a relatively short time rarely reaching young adult life.

The studies of Lewis and Grant have conclusively demonstrated the importance of mechanical factors in determining the localization of the infective agent. It is interesting to learn that Sir James Paget in 1844 described the first case of acute vegetative endocarditis occurring upon an anomaly of the pulmonary valve.

The defects of the semi-lunar valves are not at all uncommon. Usually the anomaly consists in a fusion of two of the cusps with some resulting deformity, occasionally there is a fourth rudimentary cusp.

That mechanical factors play the largest part in determining the localization of bacteria is shown by the fact that only in cases where the defects were near the valves and where strain therefore was present, was endocarditis found. In all cases the endocarditis (acute or sub-acute bacterial) attacked valves which were the seat of congenital defects. Another point of predilection was at the pulmonary orifice of a patent ductus arteriosus in the non-cyanotic group where the communication was arterio-venous.

The frequency with which the pulmonary valves were affected and the enormous size of the vegetations in several instances was remarkable. In no

¹Maude Abbott, *Ann. Clin. Med.*, 4:189, 1925 (Sept.).

case was the demonstration of congenital defects lacking. One case is reported in which the localization of the vegetations was confined strictly to the pulmonary artery and ductus wall. The heart valves and the aorta were quite free.

From data now at hand it is extremely doubtful if the organisms causing acute and sub-acute bacterial endocarditis ever settle and grow upon normal valves or upon any part of the endocardium of a normal heart. The extreme seriousness of these diseases makes it imperative that we protect persons who have mild congenital defects from all local infections. The situation is rendered difficult for two reasons, (1) the impossibility of detecting small defects during life, and (2) the impossibility of protecting people from all local infections. At least one defect in the heart usually can be diagnosed, namely the defect in the interventricular septum usually at the base of the ventricles (*Maladie de Roger*). The peculiar situation of the thrill and systolic murmur located at the middle of the heart with no other valvular defects and no cyanosis or dyspnea, is distinctive of this rather common congenital defect. In cases of this defect Abbott has found a high incidence of bacterial infection.

The element of chance, as is so often the case in the development of other diseases, enters largely into this question of endocarditis. There can be no preventive measures directed against implantation on anomalous valves where there is no method of determining during life who has these valves. In only the one congenital defect, defect of the interventricular septum, can the diagnosis be made with any certainty. However, all modern hygienic measures directed towards lessening the number and severity of upper respiratory and middle ear infections will aid in reducing to a minimum the number of victims of this most serious and practically always fatal disease, bacterial endocarditis.—L. M. W.

THE JOURNAL IN 1926

AT the last meeting of the Editorial Board of this Journal considerable time was devoted to discussion of just what field state medical journals should attempt to fill. The path of least resistance would be to follow conventional lines and to imitate, as well as we can, those journals which have established a high place for themselves. This, however, is just what the present Board wishes to avoid.

It seems to us that there is a very distinct and interesting field for the state medical journal. As much as possible it should be in furnishing news and other reading matter which is not to be found elsewhere. Obviously we cannot compete with the best of the large journals *on their terms*. But for that matter neither can they compete with us if we hew out a distinctive notch for ourselves.

We have already made very satisfactory progress in making the Wisconsin Medical Journal a conspicuous Journal in its class. Perhaps as one of its owners and as one not having access to other state journals for comparison, you do not realize how comparatively good it is. But we are not content. On the contrary, the taste of such success and such compliments as we have had has created a strong desire for more. And so, during the coming year we are going to try out other innovations, hoping thereby that we shall please our readers and through them impress upon medical journal advertisers that the Wisconsin Medical Journal is an indispensable state journal—H. E. D.

NEW EXAMINERS ANNOUNCED

Four appointments to the State Board of Medical Examiners for terms ending July 1, 1929, were announced by Gov. John J. Blaine on Wednesday, December 2nd. Dr. J. B. Brewer, eclectic, of Jefferson, was appointed to succeed himself as was Dr. E. C. Murphy, osteopath, of Eau Claire.

Dr. Thomas J. Sheehy of Tonah, allopath, was appointed to succeed Dr. R. B. Cunningham of Cadott. Dr. Sheehy served as a lieutenant in the medical corps during the world war. He is a graduate of the Loyola University School of Medicine, Chicago, in 1912 and was licensed the same year. He is a Fellow of the American Medical Association and his specialty is pediatrics.

As the fourth appointment the Governor appointed Dr. Wilbur N. Linn, homeopath, of Oshkosh, to succeed Dr. Minnie C. Hopkins of Oconto. Dr. Linn graduated from the Hahnemann Medical College, Chicago, in 1900 and was licensed in Wisconsin in 1908. He served a term on the State Board of Medical Examiners some years ago. His specialty is ophthalmology. Drs. Brewer, Sheehy and Linn are all members of the State Medical Society of Wisconsin.

The Board as now constituted includes the above mentioned and Dr. J. Gurney Taylor, Milwaukee (President); Dr. R. E. Flynn, La Crosse (Secretary); Dr. C. W. Rodecker, Holcombe, and Dr. Edith Haigh Stevens of Madison.

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ORGANIZED 1841

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SOCIETY PROCEEDINGS

BARRON-POLK-WASHBURN-SAWYER-BURNETT

The members of the Barron-Polk-Washburn-Sawyer-Burnett County Medical Society met at the Elk's Club, Rice Lake, on December 1st. Papers were presented by Dr. R. G. Arveson, Frederic, Dr. J. M. Dodd, Ashland, and by Dr. Leo Hilger of St. Paul, Minn. Dr. D. L. Dawson, Rice Lake, spoke on "Rectal Injuries;" Dr. H. M. Stang, Eau Claire, on "The Clinical Significance of Hematuria," and Dr. Nels Werner, Eau Claire, on "The Various Angles of Goiter."—I. G. B.

BROWN-KEWAUNEE

Thirty-eight physicians from Brown-Kewaunee and neighboring counties heard Dr. W. F. Lorenz, former head of the State Board of Control and now professor of neuro-psychiatry at the State University, and his three associate professors, Drs. H. C. Gilson, W. J. Bleckwenn and Hans H. Reese, demonstrate and discuss methods for examining alleged insane for legal commitment and apply the Binet-Simon intelligence tests at a clinic in Brown County Asylum on November 3rd. The clinic was held in the afternoon from 4:00 to 5:30 and was followed by a dinner at six o'clock at Hotel Northland, Green Bay. The Madison physicians were speakers on the evening program, each talk being followed by discussion and several of them supplemented with lantern slides. It was declared to be one of the best meetings ever held at Green Bay.—F. M. H.

CHIPPEWA

The members of the Chippewa County Medical Society met at Hotel Northern, Chippewa Falls, on the evening of November 6th. A banquet preceded the meeting at which talks were given by Dr. F. A. Davis and Dr. Carl A. Hedblom, Madison, and papers were discussed by Drs. A. J. Somers, F. T. McHugh, S. E. Williams, and C. H. Hatleberg.—C. A. C.

DANE

The dinner-meeting of the Dane County Medical Society was held at the Madison Club on November 18th. Dr. Wm. F. Lorenz spoke on "Mental Symptoms Associated with Certain Common Physical Ailments." Dr. Wm. F. Whyte presented an historical paper on "The Resurrectionists in Scotland."—L. F.

FOND DU LAC

Dr. D. J. Twohig of Fond du Lac presented a paper on "Abdominal Injuries" before the Fond du Lac County Medical Society on November 11th. New officers for the ensuing year were elected at this meeting.—D. N. W.

GRANT

The members of the Grant County Medical Society held their annual meeting at the Grantland Club Rooms, Lancaster, on November 27th. The banquet at 6:30 preceded the meeting. Dr. John C. Hancock of Dubuque, Iowa, presented a paper on "Tuberculosis of

Kidney." Dr. Carl A. Hedblom, Madison, spoke on "Surgical Treatment of Pulmonary Tuberculosis;" W. D. Stovall, Director State Laboratory of Hygiene, on "Scarlet Fever," and J. G. Crownhart, State Secretary, discussed "Some Plans for the Future." Election of officers followed this most instructive program.

—M. B. G.

LANGLADE

The annual meeting of the Langlade County Medical Society was held at Hotel Butterfield, Antigo, on November 19th. After a six course dinner, cigars were passed and Dr. L. A. Steffen, president, called the meeting to order. Various matters of interest were discussed, including clinical cases and the advisability of holding meetings more often in the future.

The following officers were elected for the ensuing year: Dr. E. G. Bloor, president; Dr. P. J. Dailey, vice-president; Dr. J. C. Wright, secretary and treasurer. Dr. Wright was also elected delegate to the state annual meeting with Dr. G. E. Moore as alternate.

—J. C. W.

MARATHON

The business meeting of Marathon County Medical Society was held on October 21st immediately following the dinner given in honor of Dr. Joseph F. Smith, president-elect of the State Society. Dr. H. T. Schlegel read a paper on ultra-violet ray therapy as applied to the eye, nose and throat. It was decided by the society to close all the offices of physicians in the city of Wausau Saturday afternoons at 1:00 o'clock. This rule will be permanent all the year around, and had been applied heretofore only during the summer months.—J. M. F.

MARINETTE-FLORENCE

The Marinette-Florence County Medical Society held its annual meeting Thursday evening, November 19th. Dr. Arnold Jackson of Madison presented a paper on "Goiter," illustrated with slides, which was most interesting.

The election of officers followed a turkey dinner: President, Dr. T. J. Redelings; Vice-President, Dr. H. F. Schroeder, Secretary-Treasurer, Dr. M. D. Bird; Delegate, Dr. G. R. Duer; Alternate, Dr. J. V. May; Censors, Drs. M. D. Bird, J. W. Boren, and S. Berglund.—M. D. B.

MILWAUKEE

The Milwaukee County Medical Society and the Milwaukee Neuro-Psychiatric Society met in joint session at the Milwaukee County Hospital for the Insane on Friday, November 13th. A buffet luncheon was served before the meeting. The program consisted of a symposium on the work of Milwaukee County institutions. Dr. A. F. Young, Supt. of Milwaukee County Hospital for Mental and Nervous Diseases, spoke on "The Hospital for Mental and Nervous Diseases." Mr. William Coffey, County Manager, presented the subject "A Survey of County Activities." Dr. Harry Sargent, Supt. of Milwaukee County Hospital, gave a talk on "The County Hospital," and Dr. G. L. Bellis, Supt. Mairdale Sanatorium for Tuberculosis, spoke on "Mairdale."—E. L. T.

OUTAGAMIE

The Outagamie County Medical Society held its regular November meeting on the 17th. In the afternoon from 3:00 to 6:00 Dr. Danial Eisendrath, Professor of Urology, Chicago College of Physicians and Surgeons, held a urological clinic. Five patients were examined and discussed at this time. The clinic was attended by about twenty physicians. In the evening at the Hotel Conway, Dr. Eisendrath presented a paper on "The Treatment of Kidney Affections." This lecture was illustrated by lantern slides, and was one of the best the society has had in many months. The meeting was attended by about seventy-five physicians from the Fox River Valley.—E. L. B.

WASHINGTON-OZAUKEE

The annual meeting of the Washington-Ozaukee County Medical Society was held at Hotel Wilson, Port Washington, Wednesday evening, October 28th. At 6:30 a chicken dinner was served after which the following program was presented: Report of delegate to State Meeting, Dr. H. M. Lynch; The president's address, "Periodic Health Examinations," Dr. J. E. Reichert; "The Diagnosis and Treatment of the Commoner Skin Diseases," Dr. Harry R. Foerster, Milwaukee. Miss Elza K. Zinke, state representative for Hygeia, and Mr. J. G. Crownhart, state secretary, also spoke at the meeting. The following officers were elected for the ensuing year: President, Dr. Charles Balkwill, Grafton; Vice-President, Dr. H. H. Albers, Allenton; Secretary-Treasurer, Dr. A. H. Heidner, West Bend.

GREEN BAY ACADEMY

At the meeting of the Green Bay Academy of Medicine held at the Bellin Memorial Hospital, the evening of November 11th, Dr. W. H. Bartran of Green Bay, read a very comprehensive paper on "Digestive Disturbances accompanying a Diseased Pancreas." The paper was discussed by Drs. I. E. Levitas and R. M. Carter, both of Green Bay.—E. G. N.

MARQUETTE ALUMNI ASSOCIATION

The first annual clinic of the Marquette University Medical Alumni Association was held at the Marquette University Hospital on Friday and Saturday, November 6th and 7th. The two-day program follows:

Friday morning session: "A New Operation for Suspension of the Uterus," by Dr. M. L. Henderson, Prof. of Obstetrics and Gynecology, Marquette University School of Medicine; "Diagnosis and Management of Cardiac Decompensation," Dr. Joseph A. Purtell, Asst. Prof. of Medicine, Marquette University School of Medicine; "Discussion of Gross Pathologic Specimens," Dr. Edward L. Miloslavich, Prof. of Pathology, Marquette University School of Medicine; "Diagnosis and Management of Abnormal Obstetrical Cases," Dr. L. J. Foley, Instructor in Obstetrics and Gynecology, Marquette University School of Medicine; "Differential Diagnosis of Diseases of the Gall Bladder," Dr. E. J. Purtell, Asst. Prof. of Surgery, Marquette University School of Medicine.

Friday afternoon session: "Problems in the Surgery

of the Thyroid," Dr. F. A. Stratton, Prof. of Surgery, Marquette University School of Medicine; "Early Diagnosis of Cancer," Dr. J. P. McMahon; "A Discussion of Arthritis," Dr. W. J. Egan, Asst. Prof. of Medicine, Marquette University School of Medicine; "Fractures of the Femur in Children," Dr. O. R. Lillie, Asst. Prof. of Surgery, Marquette University School of Medicine; "Early Diagnosis of Sinus Infections," Dr. C. J. Coffey, Prof. of Oto-Laryngology, Marquette University School of Medicine; "Infections of the Eye," T. W. Klein, Clinical Assistant in Ophthalmology, University of Wisconsin, and group diagnosis of obscure cases were presented by the alumni.

Friday evening session: "Early Diagnosis of Congenital and Developmental Defects of the Face and Head," Dr. G. V. I. Brown, Prof. of Plastic Surgery, University of Wisconsin; "Early Diagnosis of Acute Medical Conditions," Dr. J. S. Evans, Prof. of Medicine, University of Wisconsin; "Physicians and the Public Health Service," Dr. O. A. Fiedler, President Wisconsin State Board of Health; "The Future Marquette Medical School," Rev. A. C. Fox, President, Marquette University.

Saturday morning session: "The Management of Certain Diseases of the Mouth, Jaw and Face," Dr. M. N. Federspiel, Prof. of Stomatology, Marquette University School of Medicine; "X-ray Diagnosis," Dr. H. B. Podlasky, Asst. Prof. of Roentgenology, Marquette University School of Medicine; "Differential Diagnosis of Peptic Ulcer," Dr. P. J. Calvy, Section on Medicine, Fond du Lac Clinic; "Diagnosis of Some of the Commoner Dermatoses," Dr. S. M. Markson, Prof. of Dermatology, Marquette University School of Medicine; "The Modern Management of the Diabetic," Dr. F. D. Murphy, Asst. Prof. of Medicine, Marquette University School of Medicine.

MILWAUKEE ACADEMY

Dr. William Egbert Robertson, Philadelphia, gave an instructive address on "The Value of Pain and Certain Reflex Phenomena in Diagnosis" before the Milwaukee Academy of Medicine on Tuesday evening, November 10th. "Aniline Shoe-Dye Poisoning" was the subject of a paper by Dr. A. J. Patek, Milwaukee.—D. W. R.

The Academy met in joint session with the Neuro-Psychiatric Society of Milwaukee on November 24th. A paper on "The Psychoneuroses and Their Medico-Legal Significance" was presented by Dr. William O. Krohn of Chicago. Dr. Krohn's experience in the courts of Chicago had eminently fitted him to discuss this subject in the most interesting and instructive manner. Dr. S. S. Stack, Jr., spoke on "Neuro-Pathology in Pernicious Anemia," which was illustrated by lantern slides.—D. W. R.

MILWAUKEE OTO-OPHTHALMIC

The Milwaukee Oto-Ophthalmic Society held a special meeting on November 19th at the Health Service Building. Prof. Geza de Takats of Budapest gave a lecture with lantern slide demonstrations on "Prolongation of Local Anesthesia, Experimental and

Clinical Research." Dr. Carl Beck of Chicago spoke on "The New Science Extension Movement of International Exchange of Scientific Authorities."—J. J. B.

NEWS ITEMS AND PERSONALS

The many Wisconsin friends of Dr. John R. McDill, well known former resident of Wisconsin, will be interested to know that he is now commanding officer of the U. S. Veterans' Bureau Hospital No. 37, Resthaven, Waukesha.

Dr. McDill was formerly in private practice in Milwaukee and was later professor of surgery, University of the Philippines. He is a well known authority on surgery of tropical diseases. The Resthaven Hospital is now a general hospital for U. S. Veterans' Bureau cases only.

Dr. Curtis A. Evans of Milwaukee was re-elected a member of the Board of Governors of the American College of Surgeons at its annual meeting held in Philadelphia, October 29th. Dr. Evans' second term will expire in 1928.

Dr. J. W. Bird, specializing in diseases of the eye, ear, nose and throat, Stevens Point, has established his practice in Rhinelander with offices on the second floor of the Rhinelander Office Supply Company Building.

Dr. W. T. Sarles' many friends will be glad to hear that the doctor continues to regain his strength. The doctor is able to visit his office from day to day and the former trustee of the American Medical Association is again a familiar figure on the streets of Sparta.

New rays greater in frequency than that of ultra x-ray were described to members of the national academy of sciences at Madison recently, by Dr. R. A. Millikan of the California Institute of Technology. The discovery is that of a cosmic ray which has 1,000 times the mean frequency of x-rays and is of far greater frequency than the gamma rays of radium.

Thirty members of the Marathon County Medical Society attended a dinner given recently at the Wausau Club House in honor of Dr. Joseph F. Smith, as president-elect of the State Society and in further recognition of Dr. Smith's services to the profession of surgery. Dr. E. M. Macaulay presided and after the enjoyment of the menu, Dr. R. W. Jones gave an address in which he expressed, on behalf of the members, the appreciation felt for the honor bestowed by the State Society upon a fellow member. Dr. Smith in response thanked the physicians for this expression of good will and spoke on future plans and work of the medical societies.

Dr. John Tasche of the surgical department of the Sheboygan clinic has left for Vienna where he will study with Dr. Hans Finsterer, who visited this country about two years ago. During his visit in the United States he showed the improvement in abdominal surgery by local anesthesia. Dr. Tasche having practiced in She-

boygan for many years, became connected with the surgical department of the clinic upon its organization.

Dr. Stanley J. Seeger, Milwaukee, has just returned from a three months' clinical trip in England.

Dr. L. C. Combaeker, formerly of Minneapolis, has announced the opening of offices at 407 Insurance Bldg., Appleton. He will also have office hours daily at Neenah in the rooms occupied by Drs. Pratt, Ketels and Briggs. Dr. Combaeker will limit his practice to eye, ear, nose and throat.

Dr. Chester L. Carlisle, who has been medical officer in charge of U. S. Veterans' Hospital No. 37 for the past three years, will be transferred to Bronx, N. Y., and become clinical director of Hospital No. 81, the largest veterans' hospital devoted to mental and nervous cases. Dr. Carlisle is just completing his twenty-fifth continuous year as a specialist in neuropsychiatry.

A new office building is being erected by Drs. G. J. Flanagan and E. J. Bolinske at Kaukauna. The construction will be rushed as the doctors are very anxious to occupy the building as soon as possible, which will be a model for equipment and convenience, containing every necessary need for each doctor and private rooms for each department of their service.

Country doctors are as scarce in some sections of Japan as they are in America. In some rural sections near Tokio there is but one doctor to every 20,000 inhabitants. To encourage doctors to locate in these sections the government is offering about \$900 a year bonus.

Dr. C. S. Sheldon, Madison, returned recently from Portland, Oregon, where he spent about six weeks visiting his son, a physician in that city. While there, a dinner was given in his honor by the Yale men of Portland. Dr. Sheldon is the oldest, but the most active, of the thirty Yale men in the city of Madison, where he is president of the Yale Club.

Twenty-five milligrams of radium has been purchased by St. Joseph's Hospital, Ashland, at a cost of \$2,000 for the treatment of cancer, removal of birthmarks, and other medical uses. It was received at the hospital in three little lead caskets and stored in the steel vault.

Radium cost as high as \$135,000 a gram during the war. To get this amount, many tons of ore must be mined. The principal sources are Austria and the Belgian Congo.

Dr. J. P. Lenfestey, De Pere, and Dr. R. C. Buchanan, Green Bay, who have been in Europe for the past three months, have now returned to their respective practices.

Dr. T. D. Smith and J. M. Donovan have moved their offices into the new building on E. Wisconsin Ave., Neenah, which has just been completed. The building contains the dentistry equipment of Dr. Donovan and the complete equipment for Dr. Smith as physician.

Nearly one out of every three adult deaths in Wisconsin during 1924 was from tuberculosis, cancer or diseases of the heart. This showing is the subject of comment in the quarterly bulletin published by the State Board of Health, which adds that most of these deaths were preventable, and nearly all of them were premature. Deaths from these causes totalled 8,655.

Two physicians and surgeons have opened up offices at Walworth. Dr. M. R. Hadden, who comes from Henrotin Hospital, Chicago, has established his office on Kenosha Street. Dr. M. C. Crane will have his office in the rooms formerly occupied by Dr. J. H. Tenpenny. Dr. Crane has practiced at Weyauwega and Osseo and for two and one-half years was ship surgeon in the Mercantile Marine. His family is still in Los Angeles and will not come to Walworth until the son finishes school next spring.

Dr. Lawrence F. Dugan, house physician at the Emergency Hospital, Milwaukee, submitted his resignation on November 15th. Dr. Harry T. King, a graduate of Marquette University School of Medicine, has been appointed to the position. Dr. Dugan will enter private practice and Dr. King will give up his practice in Minneapolis to accept the hospital post.

Announcement was made that Dr. Edgar J. Craite, who submitted his resignation some time ago, will remain at the hospital for an indefinite period, complying with the request of hospital heads.

Dr. F. C. Christensen has returned to Racine from a two year post-graduate course in New York and Vienna. Dr. Christensen spent nineteen months in New York, where he studied pathology one year with Prof. Erving at Cornell University Medical College. He also pursued studies at the New York Post-Graduate Medical School and Hospital, the New York Hospital, and the Memorial Hospital for cancer and allied diseases.

Dr. Christensen left for Vienna in June, 1925, where he again studied pathology and abdominal surgery and gynecology.

In a verdict brought in recently by the federal jury. Dr. Frederic Mueller, Chicago orthopedist, was directed to pay \$5,250 for personal damages suffered, it was alleged, by Ada Manske of Milwaukee. The plaintiff sued for \$25,000 and alleged that the doctor treated her for infected tonsils when she was suffering from a fractured hip.

Dr. Vera Donchakoff, a Russian physician and biologist, was the honor guest at a luncheon given recently by the superintendent of the Wisconsin Industrial Home for Women at Taycheedah. Dr. Donchakoff is an American citizen, and for the past ten years has been a professor in the medical school of Columbia University at New York City. At present the doctor is on her way to Russia, where she intends to do such medical work as the present Russian government will permit.

Dr. K. K. Borsack of Fond du Lac was also a guest at the luncheon.

"Early days of the pharmacy course at the University of Wisconsin were in keeping with my fortune to undertake pioneer work in most positions," admitted Dr. Frederiek B. Power in an address before the pharmacy students at Madison, who were gathered to hear a few things about their course from the man who organized that course in 1883 and who acted as its director from that date to 1892.

Dr. Power, who is at the present time director of Phytochemical Research of the Bureau of Plant Chemistry, Washington, D. C., was at Madison to attend the meeting of the American Academy of Science and to deliver an address at one of the sessions of that organization.

Janesville physicians acted as honorary bearers at the funeral of Mrs. Kathryn Nichols Palmer, wife of Dr. W. H. Palmer. The honorary bearers were: Drs. F. B. Farnsworth, R. F. Lintleman, W. A. Munn, J. F. Pember, William H. McGuire, Frank Van Kirk, J. P. Thorne, Vincent Koch, W. L. Johnson, and Arthur Echternacht.

Announcement of the appointment of Dr. M. G. Peterman as director of the medical laboratories of the Milwaukee Children's Hospital was made at the board of directors' meeting. The new laboratory head will assume his duties at once. Dr. Peterman comes from the Mayo clinic of Rochester, Minn.

The sixth annual convention of the Wisconsin Hospital Association was held in Milwaukee on November 17th, 18th and 19th at Hotel Pfister. Mayor Hoan gave the address of welcome on the first afternoon of the three-day session. Dr. Edward A. Fitzpatrick, Marquette University, spoke on the modern hospital and social service. Papers, on Tuesday evening, were read by Matthew Foley, Chicago, managing editor of Hospital Management; Miss Ada Eldredge, Madison, director of nursing education for Wisconsin; Miss Ellen Stewart, superintendent of Theda Clark Memorial Hospital, Neenah, and Miss Lydia Reich, Milwaukee Deaconess Hospital. An illustrated lecture on X-ray valuations was given by Dr. James T. Case, Battle Creek Sanatorium.

On Wednesday morning papers were read by Dr. J. W. Coon, Medical Director of River Pines Sanatorium, Stevens Point; Dr. John Coulter, Chicago, and Dr. E. L. Miloslavich, Marquette University.

Hospital accounting was explained by F. H. Elwell of the University of Wisconsin on Wednesday afternoon. Others on the program were Charles Karrow, Columbia Hospital; Dr. R. C. Buerki, superintendent of the State of Wisconsin General Hospital and C. I. Wollen, La Crosse.

A dinner for delegates was given Wednesday evening at which addresses were made by Dr. C. R. Bardeen, Dean of the Medical School, University of Wisconsin, and E. S. Gilmore, superintendent of Wesley Memorial Hospital, Chicago.

Rev. Herman L. Fritschel, Milwaukee, was re-elected



MEMBERS AND GUESTS, TREMPÉALEAU-JACKSON-BUFFALO COUNTY MEDICAL SOCIETY, WHITEHALL MEETING OF AUGUST 7TH, 1925.

Upper Row—Left to right—Dr. Robt. Nels Leasum, Osseo; A. H. Mathison, Whitehall; O. J. Eggum, Whitehall; Dr. C. F. Peterson, Independence; Dr. N. S. Simons, Whitehall; Dr. Wm. Belitz, Cochrane; Dr. F. T. Weber, Arcadia; Dr. George Christiansen, Galesville; Dr. A. Smith, Gilmanton; Dr. J. P. Reinhardt, Fountain City; Dr. J. J. Powell, Galesville; Dr. G. W. Griswold, Alma Center; Dr. J. A. Palmer, Arcadia; Dr. L. J. Walker, Merrillan; Dr. J. C. Tyvand, Whitehall; Donald Peterson, Independence; Dr. C. O. Rogne, Ettrick, and N. L. Frederickson, Whitehall.

Lower Row—Miss Sinrud, R. N., Whitehall; Dr. E. Comstock, Arcadia; Dr. E. E. Moore, Merrillan; Dr. McGuire, Richmond, Virginia; Dr. R. L. MacCornack, Whitehall; Dr. W. J. Mayo, Rochester, Minn.; Dr. H. A. Jegl, Galesville; Dr. McVicar, Rochester, Minn.; Dr. B. P. Rosenberry, Winona, Minn.; Mrs. Linton, R. N., Whitehall; Dr. D. C. Balfour, Rochester, Minn., and Dr. G. F. Stack, Independence.

president of the association; Dr. W. A. Henke, La Crosse, first vice-president; Miss Ellen Stewart, Neenah, second vice-president, and H. K. Thurston, Madison, executive secretary and treasurer.

Dr. A. F. Harter, Wausau, who has been associated with Dr. H. T. Schlegel for the past years, has dissolved partnership and is now practicing at Rhineland where he will specialize in eye, ear, nose and throat work.

Dr. D. R. Searle, Superior, was elected president of the Interurban Academy of Medicine at the annual meeting held recently. Dr. F. J. Hirschboeck, Duluth, was elected vice-president and Dr. G. J. Hathaway, Superior, was named secretary. A paper was presented by Dr. Joseph Evans, professor of internal medicine at the University of Wisconsin on "Chronic Nephritis." Over 100 physicians from Superior and Duluth attended the gathering.

Dr. Louis F. Jermain, dean of the Marquette University Medical School and personal physician to Archbishop S. G. Messmer, was made a Knight of St. Gregory by the archbishop in the chapel of the St. Francis of Assisi Convent, St. Francis, on November 22nd. There are only four prominent Catholics in the state of Wisconsin who have received this honor.

Dr. Eugene A. MacCornack, formerly of Whitehall, has just recently been appointed alcade, or mayor, of Callao, the chief seaport of Peru in South America. He is probably the first North American to govern a South American city.

Dr. MacCornack is a medical missionary of the church and superintendent of the British American hospital in Lima and lived in Whitehall for about eight years previous to his departure for the mission field. The doctor received his appointment from President A. B. Leguia of Peru. Callao has an estimated population

of 39,000 and is one of the oldest of Peruvian cities. In his new capacity, he will continue to direct the hospital at Lima.

MARRIAGES

Dr. Roland Spuhler Cron and Miss Florence Marie Schroeder were united in marriage at Milwaukee on November 14th.

DEATHS

Dr. Knute O. Hoegh, a former resident of La Crosse, died at his home in Minneapolis after an illness of two and one-half years. Dr. Hoegh, who was 82 years old, was born at Trondhjem, Norway, where he received his early education. He was graduated from the medical school at Oslo University, Oslo, in 1869 and came to America the same year. He came directly to La Crosse, where he practiced for eighteen years before going to Minneapolis.

Dr. Hoegh was chief of surgeons at St. Barnabas Hospital, Minneapolis, and a fellow of the American College of Surgeons.

Dr. John H. Sharp, aged 73, died at his home in Genesee Depot on November 10th. He had been a practicing physician in the western part of Waukesha county for forty years. Dr. Sharp was born in Northville, Pa., in 1852, and received his schooling in that vicinity. He obtained his professional education at Hahnemann Medical School and the Chicago Homeopathic School. He moved to Wisconsin in 1883 and for three years resided and practiced at Eagle. In 1886 he came to Genesee Depot, where he has since resided.

Dr. Sharp is survived by two brothers, Dr. Charles E. Sharp of Chicago and Dr. Robert Sharp of Columbus, Ohio, and eight sisters.

Dr. F. E. Morley, Viroqua, died on November 21st of cerebral hemorrhage. Dr. Morley was born in 1861 and graduated from Rush Medical College in 1893. He

has practiced medicine in the state of Wisconsin for over twenty years.

Dr. Morley was a member of the Vernon County Medical Society, the State Medical Society of Wisconsin and the American Medical Association.

Dr. P. T. Trowbridge, Hayward, was stricken while on his way home from an all night professional call in Cable on Thanksgiving morning and died at the wheel of his car. Tracks in the road indicated that Dr. Trowbridge felt the attack coming on and applied his brakes, the car traveling some sixty feet and overturning.

Dr. Trowbridge was born in 1887 and graduated from the Milwaukee Medical College in 1910. He was a member of the Barron-Polk-Washburn-Sawyer-Burnett County Medical Society, the State Medical Society of Wisconsin and the American Medical Association.

CORRESPONDENCE

IS THIS A RECORD?

Multipara—age 28—married Nov. 9th, 1921. First baby a girl born Feb. 27th, 1924. Second baby a girl born Jan. 12th, 1925. On October 30th, I delivered the mother of triplets; 2:20 P. M., a six pound boy; 2:55 a four and three quarters pound girl and at 3:15 a four and a half pound girl. All doing fine. Examination upon arriving at home revealed a foot presentation. Delivering this baby I found I was dealing with a case of multiple pregnancy. The second was an arm presentation, where I did a podalic version and delivered, only to find another arm presentation. I did another podalic version and delivered. There were three separate placentae. Four babies delivered to this mother within nine months and eighteen days. Second triplets to be born in Manitowoc county in the history of the county. That night I confined two other women thus making a record of delivering five babies within sixteen hours.

Edwin C. Cary.

EXAMINATION RESULTS

St. Louis, November 19, 1925.

To the Editor—

Will you do us the favor to publish the subjoined notice, and oblige

Yours very truly,

H. W. Loeb,

Secretary.

AMERICAN BOARD OF OTOLARYNGOLOGY

An examination was held by the American Board of Otolaryngology on October 19, 1925, at the Cook County Hospital, Chicago, with the following result—

Passed	120
Failed	23

Total Examined143

The next examination will be held in Dallas, Texas, on April 19, 1926. Applications may be secured from the Secretary, Dr. H. W. Loeb, 1402 South Grand Boulevard, St. Louis, Missouri.

NEW ADDRESS

Madison, Nov. 19, 1925.

J. G. Crownhart, Secretary-**Managing Editor**,
The Wisconsin Medical Journal,
Milwaukee, Wisconsin.

My Dear Major:

Will you kindly carry the following notice in one or two issues of the State Medical Journal? I am making this request because it is not generally known by the physicians who receive our service that the Institute has moved from Mendota to the University at Madison. Old containers for the shipment of specimens that are still in their hands are labeled with a return address to Mendota. Containers that we send out now are labeled with a return address to the Wisconsin Psychiatric Institute at Madison but owing to old containers in their possession a large number of specimens are being received at Mendota. We being at Madison this entails a loss of time and in some instances accounts for lost specimens as well. I would, therefore, suggest that a notice be carried in the Journal to the effect that the Wisconsin Psychiatric Institute is now situated at the University of Wisconsin, Madison, Wisconsin; that all specimens for Wassermann examination, all specimens of cerebro-spinal fluid and all blood specimens for chemical examination be addressed to the Wisconsin Psychiatric Institute, Madison, Wisconsin, in the future.

Very truly yours,

W. F. Lorenz, M.D., Director,

Wisconsin Psychiatric Institute.

SOCIETY RECORDS

NEW MEMBERS

Cottingham, M. D., 516 No. 8th St., Sheboygan.

Sonnenburg, C. N., 630 No. 8th St., Sheboygan.

CHANGES IN ADDRESS

Southwick, Frank A., Stevens Point, to Mt. Vernon, N. Y.

Thompson, J. B., Racine, to Wittenberg.

Maurer, A. A., La Crosse, to 72 Fifth Ave., New York City.

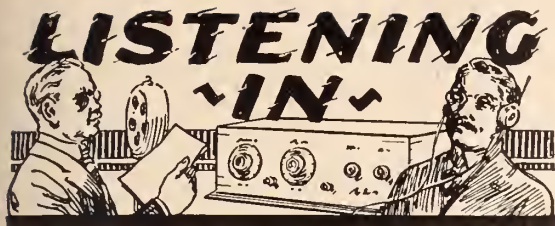
Combacker, Leon C., Osceola, to 407 Insurance Bldg., Appleton.

Whyte, W. F., Madison, to 1707 So. Kingsley Drive, Los Angeles, Calif.

DR. HEDBLOM RESIGNS

Dr. Carl A. Hedblom, surgeon of the State of Wisconsin General Hospital, presented his resignation to the Board of Regents of the University at a meeting of the Board on December second. Dr. Hedblom leaves on February first to become professor of surgery at the University of Illinois. He will be chief surgeon of the university hospital at Urbana and, it is understood, will become a member of the staff of Augustana Hospital.

Dr. Hedblom came to Madison from the Mayo Clinic a year ago. He had previously been professor of surgery at the Harvard Medical School of China.



The secretaries of all state medical societies held their annual conference at the headquarters of the American Medical Association, Chicago, on November 20th and 21st. A feature of the conference was a correlated conference on periodic health examinations of apparently healthy persons. Before the latter conference Dr. Hoyt E. Dearholt, Councilor, gave an address on the education of the laity by lay-medical associations.

Wisconsin was represented at the secretaries' conference by President-Elect Joseph F. Smith, Wausau; Treasurer Rock Sleyster, Wauwatosa; Dr. Dearholt and the Secretary.

Subjects of discussion at the conference included state programs for public instruction, organization efforts, state programs of aid to county societies and qualifications for membership in the county and state societies. The conference was first addressed by President William D. Haggard of the American Medical Association. Dr. Haggard stressed the importance of lay educational efforts, the need for a closer contact between the medical profession and the daily press and the possibilities that existed in the field of examining the apparently healthy person.

These annual conferences are for the purpose of an exchange of organization thought and correlation of the activities in each of the many state associations.

Six states are now employing full-time lay secretaries as follows: Ohio, Virginia, Wisconsin, West Virginia, Michigan and Indiana. Several other states are using the full and part time services of physicians including such states as Pennsylvania and New York. Other states are employing full-time lay officers although not in the position of secretary-managing editor. Such states include: Iowa, Illinois and New York. It was interesting to note that the majority of state societies had very greatly increased their dues during the past few years. The dues of many of the state associations are now \$10.00 while other states have fixed their dues at figures higher than \$10.00. A notable example is Oregon, which has raised its dues to \$20.00.

Visits at Milwaukee

At the close of the conference Mr. S. O. Neale, secretary of the West Virginia Medical Association, spent a day in Milwaukee for the purpose of observing the methods used in Wisconsin in its several fields of activity. Mr. Neale visited Wisconsin at the request of his council.

Advertising Costs

Interesting reports were made at the secretaries' conference on the work that some few state associations are doing in the field of educating the laity through the

medium of paid advertisements in the daily press. It was brought out, however, that the program such as exists in Texas, for instance, costs in excess of \$30,000 annually, the exact amount not being known. The lay educational efforts in Illinois demand a budget of close to \$20,000 annually.

Inquiries Continue

Letters from other state and public health organizations continue to request copies of Wisconsin's Basic Science law. Recent requests include letters from the National Board of Medical Examiners, the Medical Society of the State of New York, the West Virginia Medical Association, and the Minnesota State Medical Association.

County Society First

Dr. Olin West, secretary of the American Medical Association, in discussing a paper at the secretaries' conference, emphasized the point that the program of any state medical society would be a failure unless it concentrated its first efforts in maintaining the best possible organization in the county societies. Dr. West pointed out that county society organization is a prerequisite to any effective work by a state association, no matter in what field.

To Distribute Manuals

With the cordial cooperation of the Wisconsin State Board of Health, it is hoped that plans may soon be completed to provide every member of the state society with a copy of the Manual on Periodic Examinations of the Apparently Healthy as published by the American Medical Association and a copy of "Essential Facts About Cancer, A Handbook for the Medical Profession" as published by the American Society for the Control of Cancer. The last session of the House of Delegates made available some \$500 for this latter purpose and with a nearly like appropriation by the State Board of Health, this work will be possible. It is anticipated that the distribution of the two manuals, if approved, will be made during the latter part of December.

Many Visits

In accordance with the policy of visiting as many county societies as possible, your secretary has been out of the office during a large part of October and November. The visits included: Washington-Ozaukee, Trempealeau-Jackson-Buffalo, Rock, Grant, Dane and special trips to Sparta, La Crosse, Fort Atkinson and Chicago. Due to illness an engagement at Langlade County was cancelled. This is the second cancelled engagement in three years.

Committee Meeting

The Committee on Public Policy and Legislation of the State Society met in Milwaukee on Sunday, December 6th, to discuss and outline the work of the committee for 1926.

Narcotic Tax

As result of efforts of the American Medical Association and its constituent state societies, the Committee on Ways and Means of the House of Representatives has incorporated in its proposed tax reduction bill the proposal of the medical profession that the tax on narcotic permits be reduced from \$3.00 to \$1.00 annually. The tax was formerly \$1.00 and was tripled in 1918.

Federal and State Laws Affecting Wisconsin Physicians Briefly Summarized: New Laws Explained

With the cooperation of federal and state officials, The Journal publishes herewith a summary of those laws and rulings that vitally affect Wisconsin physicians. Every effort has been made to the end that no unwarranted statement shall appear and it is believed that the summary is accurate. Members are advised, however, to obtain a copy of any law or ruling where important questions are at stake. For the convenience of the members a subject index to the summary follows:

Federal Income Tax Law.....	Page 430
State Income Tax Law.....	Page 432
Laws Governing Licensure.....	Page 434
Federal Prohibition Law.....	Page 434
State Prohibition Law.....	Page 436
State Health Laws.....	Page 436
State General Hospital.....	Page 439
Federal Narcotic Law.....	Page 440
State Narcotic Law.....	Page 440
American Medical Association.....	Page XXIV

FEDERAL INCOME TAX PROVISIONS AFFECTING PHYSICIANS

It will be noted that returns need not be filed before the middle of March. It is probable that before that time Congress will make several changes retro-active for 1925.

A sharp revision of the normal tax rate and a modification of the surtax and provision for an "earned income" reduction constitute the most important changes made in the federal income tax law, which was amended by Congress last spring.

Returns must be made to the Collector of Internal Revenue of the district in which the individual affected resides before March 15, 1926.

Responsibility for making these returns is vested with the individual. Blank forms are mailed to all known persons who have previously made returns. Failure to receive such forms, however, will not be accepted as an excuse for failure to file within the time specified by the law.

Under regulations effective last year, all persons deriving incomes from a business or profession, or both, are required to file their return upon Form 1040 (the large form). The small form, or 1040A, is for persons who secure their incomes from wages, salaries or interest alone and where the gross amount is less than \$5,000. The large form, or 1040, is also used by persons reporting an income of \$5,000 or over, regardless of the nature of its source.

The large form, or 1040, will be mailed to all Wisconsin physicians by the Collectors of Internal Revenue. If such blank is not received, apply to the Collector of Internal Revenue of the district in which you reside.

NEW RATES

The Normal Tax Rates: First \$4,000 in excess of credits, *two per cent*; next \$4,000, *four per cent*; and the remainder of net income, *six per cent*.

The Surtax Rates: Surtax is computed upon net income before personal exemption dividends and taxable liberty bond interest is deducted. The surtax is not applicable to net incomes of less than \$10,000.00 and upon net income in excess of that amount, the tax is

levied on a graduated scale. A partial list of surtax rates is shown below:

	Rate of Tax	Tax
Net incomes up to \$10,000.....		None
In excess of \$10,000.00 and not in excess of \$14,000.00.....	1%	\$ 40.00
In excess of \$14,000.00 and not in excess of \$16,000.00.....	2%	80.00
In excess of \$16,000.00 and not in excess of \$18,000.00.....	3%	140.00
In excess of \$18,000.00 and not in excess of \$20,000.00.....	4%	220.00

For example, a person having a net income of \$11,500.00 will be required to pay a 1% surtax on that amount of income in excess of \$10,000.00 or 1% on \$1,500.00, a surtax of \$15.00. A person whose net income was \$14,800.00 would compute his surtax as 1% on the first \$4,000.00 in excess of \$10,000.00 or \$40.00 plus 2% on net income in excess of \$14,000.00, that is, 2% on \$800.00, \$16.00; a total of \$56.00 surtax.

LIABILITY TO FILE

If married, a return should be filed if the net income was \$2,500 or over. If single, a return should be filed if the net income was \$1,000 or over. If the *Gross Income* was \$5,000 or over, a return is required whether married or single, and regardless of the net amount left over after legitimate expenses are deducted.

Liability to file a return is contingent upon the amount of net income, and not upon a net income with personal exemptions deducted. In other words, if the net income was \$1,000 or \$2,500, single or married respectively, and personal exemptions reduce these amounts, individuals *will not be required* to pay a tax, *but must file a return*.

The Internal Revenue authorities consider a person married on December 31, 1925, as being eligible to the marital exemptions.

PERSONAL EXEMPTIONS ALLOWED

If married and living with wife, or the head of a family for the entire year an exemption of \$2,500 is permitted.

If single, and not the head of a family, the personal exemption is \$1,000. An additional \$400 for each

person, other than husband or wife, dependent upon and receiving support from you, is allowed, provided the dependent is under 18 years of age, or incapable of support because of mental or physical condition.

In the case of a change in marital status during the year, the exemptions of \$2,500 and \$1,000 shall be prorated over the period of married and single state.

OFFICE RENTALS

If a physician pays rent to another person for office space, he is permitted to deduct the amount from his gross income. If he owns his home and maintains an office in it, he cannot claim a deduction for office rent.

AUTOMOBILE

The cost of repair and upkeep of an automobile used in professional visits may be deducted. The salary of a chauffeur, if most of his time is spent in driving to professional calls, may also be deducted. Sums spent for taxi hire, car fares, etc., while on professional calls, may be deducted. The basic cost of a business automobile may be depreciated.

However, the excise, or "War Tax" paid on the purchase of a new automobile is not deductible, for the reason that this tax is assessed against the manufacturer, who passes it on to the purchaser as a part of the cost of the machine. The original cost of a business automobile, however, may be depreciated. To arrive at original cost of a business automobile take the list price of car, f. o. b. factory, which is the basis of deduction, but divided over a period of years. In other words, if the list price of an automobile is \$2,000 and its estimated period of usefulness is five years, \$400 or 20 per cent of list price, f. o. b., may be deducted each year for 5 years.

ASSISTANTS

Deductions are permitted for the salary of a nurse, laboratory assistant, stenographer or clerical worker in the office so long as the duties of these are in connection with the physician's professional work. Wages paid to maids taking care of the office, answering the telephones are also deductible, as are any funds paid to employes for services rendered in connection with practice, or care and treatment of patients.

MEDICINES, INSTRUMENTS, SUPPLIES

Medicines used in the office to treat patients, bandaging, laboratory materials and all other supplies necessary to operate a physician's office may be deducted. Upon surgical instruments, one-fifth of the purchase price may be deducted annually for five years under depreciation account.

GENERAL OFFICE EXPENSE

Cost of all telephones used in the office is exempt and may be deducted. Expenditures for heat, light and water for the office may be deducted. An annual depreciation of 10 per cent of the cost of office furnishings and fixtures may be deducted.

LIBRARY

Most physicians have a more or less extensive library. Courts have held that medical books during the course of ten years become out of date. For this reason, a 10 per cent depreciation may be deducted annually.

TAXES, LICENSES

Any taxes paid upon materials required in profes-

sional work are exempt. All licenses which the physician is required to take out, may be taken off the gross income reported. This includes the license to prescribe or use alcohol, narcotic tax, automobile license, local occupational taxes, etc.

PROFESSIONAL DUES

Dues paid to professional associations to which, in the interest of his business or profession he belongs, are exempt and may be deducted. Also subscriptions to all medical journals or scientific publications are exempt. However, the Internal Revenue Collector has announced that expenses involved in attending the annual meetings of professional societies are not a deductible item.

WHEN TO DEDUCT DEBTS

If the physician's books are kept according to the "Cash Receipts and Disbursements" system, he may not charge off any unpaid debts because "if his books are kept according to this system, he is not only reporting as gross income those accounts which have proved to be good and therefore bad accounts cannot be deducted because they have already been excluded."

If the books are kept upon an "accrual basis" (that is if the basis of expense actually incurred and payable even though not yet paid, or income earned although not yet collected), it is permitted to charge off on the income tax blank all debts which have been definitely ascertained to be worthless during the fiscal year covered by the report.

In the same way, the physician is permitted to claim deductions for all other expenses within the scope of his profession, and the amount of his tax is determined on the net income which remains after all these items have been deducted.

EARNED INCOME

For several years students of income taxation have contended that income derived from the personal endeavor of a tax payer should not be taxed at as great a rate as is income derived from other sources. This fact is for the first time recognized in the new law which provides that the income shall be first computed in the usual way and then it shall be recomputed on the earned income as if that income were the entire income.

The term "Earned Income" means wages, salaries, professional fees, or compensation for services.

The first \$5,000.00 of net income is considered earned income, no matter from what source derived. The 20% limitation placed on net income derived from a business where both capital and personal service are material income producing factors, is not applicable to physicians whose income is held to be directly attributable to their rendition of personal service. However, in no case may the earned income be considered to be more than \$10,000.00.

It is anticipated that the earned income credit provision of the law will create a great amount of confusion in the computation of tax and for the benefit of our readers an example applicable to the income of a physician is given below:

Net income from practice.....	\$ 8,000.00
Net income from rents.....	500.00
Net income from sale of property.....	5,000.00
Total net income.....	<u>13,500.00</u>

Taxpayer married with two dependents under 18 years of age.

COMPUTATION	
Net income	\$13,500.00
Marital exemption \$2,500; dependent exemption \$800	3,300.00
<hr/>	
Subject to normal tax.....	10,200.00
First \$4,000.00 subject to normal 2% tax...	4,000.00
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	6,200.00
Second \$4,000.00 subject to normal 4% tax...	4,000.00
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Remainder subject to normal 6% tax.....	2,200.00
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Normal 2% tax.....	80.00
Normal 4% tax.....	160.00
Normal 6% tax.....	132.00
Surtax 1% on net income in excess of \$10,000.00	35.00
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	\$ 407.00
Earned income credit (see computation below)	27.00
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Total tax	380.00
COMPUTATION OF EARNED INCOME CREDIT	
Earned income (income from practice).....	8,000.00
Exemption	3,300.00
<hr/>	
Subject to normal tax.....	4,700.00
First \$4,000.00 subject to normal 2% tax...	4,000.00
Remainder subject to normal 4% tax.....	700.00
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Normal 2% tax.....	80.00
Normal 4% tax.....	28.00
<hr/>	
Total tax on earned income.....	108.00
Earned income credit $\frac{1}{4}$ of tax on earned income	27.00

As mentioned in the first paragraph of this article, the new income tax law has made a sharp division downward in the income tax and it is interesting to note that for the year 1923 the tax on the above example would have been \$821.00.

WISCONSIN TAX COMMISSION EXPLAINS STATE INCOME TAX LAWS

WHO MUST FILE RETURNS

Chapter 71.09 (3). Every corporation, joint stock company or association, whether taxable under this chapter, or not, shall furnish to the tax commission a true and accurate statement, on or before March fifteenth of each year, except that returns for fiscal years ending on some other date than December thirty-first, shall be furnished within sixty days after the last day of such year, in such manner and form and setting forth such facts as said commission shall deem necessary to enforce the provisions of this chapter. Such statement shall be made upon the oath or affirmation of the president, vice president, or other principal officer and the treasurer of said corporation, joint stock company, or association. All corporations doing business in this state shall also file with the tax commission on or before March fifteenth of each year a schedule of such transfers of its capital stock as have been made by or to residents of this state during the preceding calendar year. Such schedule shall contain the name and address of the seller and the purchaser, date of transfer, and the number of shares of stock transferred. Any corporation failing to file such schedule shall be subject to a fine of not less than fifty nor more than five hundred dollars.

Chapter 71.09 (4) (a). Whenever in the judgment of the assessor of incomes any person other than a corporation, joint stock company or association shall be subject to income tax in his district under the provisions of this chapter, he shall notify such person to make report to him on or before March fifteenth of each year in such manner and form as the tax commission shall prescribe, specifying in detail the amounts of income received by him from all sources, together with the amount of income received by his wife and each child under eighteen years of age residing together with him

as members of the family, and such other information as the commission shall deem necessary to enforce the provisions of this chapter. In case any person shall fail, neglect or refuse to make return when notified by the assessor of incomes so to do, such assessor shall estimate and assess his taxable income according to his best judgment and give notice thereof by mail. Any person who receives a taxable income during the year must report the same in the manner and form herein provided to the assessor of incomes, whether notified to do so or not, and shall be subject to the same penalties for failure to report as those who receive notice.

Chapter 71.09 (13). Every partnership shall furnish to the assessor of incomes a true and accurate statement, on or before March fifteenth of each year, except that returns for fiscal years ending on some other date than December thirty-first, shall be furnished within sixty days after the last day of such year, in such manner and form and setting forth such facts as the tax commission shall deem necessary to enforce the provisions of this chapter. Such statement shall be made upon the oath or affirmation of one of the members of said partnership.

PROPER BLANKS FOR FILING RETURNS

Corporations must report on special blanks provided and distributed by the Wisconsin Tax Commission at Madison, Wisconsin. Individuals and partnerships must report on special blanks distributed by the Assessors of Incomes of the various assessment districts.

METHODS OF ASSESSMENT AND TAXATION RATES

(a) Corporations.

The incomes of all corporations are assessed by the Wisconsin Tax Commission and taxes are computed on net taxable income as defined in the statutes at the following rates:

(1) Normal Taxes

Income	Rate
Up to \$1,000.....	2 %
Between \$1,000 and \$2,000.....	2½ %
Between \$2,000 and \$3,000.....	3 %
Between \$3,000 and \$4,000.....	3½ %
Between \$4,000 and \$5,000.....	4 %
Between \$5,000 and \$6,000.....	5 %
Over \$6,000.....	6 %

(2) Surtaxes

The teachers' retirement fund surtax rate is one-sixth of the normal tax rate for incomes in excess of three thousand dollars. The surtax is computed only on incomes in excess of \$3,000.

(b) Partnerships.

Individuals carrying on business in partnerships are liable for income tax only in their individual capacity. The partnership must file a return, however, and the net income disclosed on such return is assessable to the individual member whether distributed or not.

(c) Individuals.

The incomes of individuals are assessed by the assessors of incomes of the various counties and taxes are computed on net income less exemptions at the following rates:

(1) Normal Taxes

Income	Rate
Up to \$1,000.....	1 %
Between \$ 1,000 and \$ 2,000.....	1¼ %
Between \$ 2,000 and \$ 3,000.....	1½ %
Between \$ 3,000 and \$ 4,000.....	1¾ %
Between \$ 4,000 and \$ 5,000.....	2 %
Between \$ 5,000 and \$ 6,000.....	2½ %
Between \$ 6,000 and \$ 7,000.....	3 %
Between \$ 7,000 and \$ 8,000.....	3½ %
Between \$ 8,000 and \$ 9,000.....	4 %
Between \$ 9,000 and \$10,000.....	4½ %
Between \$10,000 and \$11,000.....	5 %
Between \$11,000 and \$12,000.....	5½ %
Over \$12,000.....	6 %

(2) Surtaxes

The teachers' retirement fund surtax rate is one sixth of the normal tax rate for incomes in excess of three thousand dollars. The surtax is computed only on income in excess of \$3,000.

INDIVIDUAL PERSONAL EXEMPTIONS

Section 71.05 (1) Exemptions. There shall be exempt from taxation under this chapter income as follows, to-wit:

- (a) To an individual, income up to and including eight hundred dollars.
- (b) To husband and wife or head of a family, sixteen hundred dollars.
- (c) For each child under the age of eighteen years, three hundred dollars.
- (d) For each additional person, who is actually supported by and entirely dependent upon the taxpayer for his support, three hundred dollars. In computing said exemptions and the amounts of taxes payable by persons residing together as members of a family, the income of the wife and the income of each child under eighteen

years of age shall be added to that of the husband or father, or if he be not living, to that of the head of the family and assessed to him, except as hereinafter provided. The taxes levied thereon shall be payable by such husband or head of the family, but if not paid by him may be enforced against any person whose income is included in the assessment.

DEDUCTIONS (EXPENSES INCIDENT TO THE PRODUCTION OF INCOME)

(a) Office Rentals.

If a physician pays rent to another person for office space, he may deduct all such amounts paid from gross income in determining net income for assessment. If he rents a home and uses a part thereof as his office, he may deduct a fair proportion of total rent paid as a business expense. If he owns a home and uses a part thereof as his office, no deduction for rent may be made. He may, however, deduct a fair proportion of depreciation, repairs, and taxes on his home as a business expense.

(b) Automobile Expenses.

Any physician may deduct from his gross income the cost of maintaining an automobile used exclusively for professional duties as well as taxi hire and carfares while on professional calls. He may not deduct, however, the original cost of the automobile but may deduct instead depreciation actually sustained. Any fair rate is acceptable and the circumstances of individual cases will govern. War tax paid on the original purchase of an automobile is not deductible, but constitutes part of the basic cost subject to depreciation.

If an automobile is used both for personal and professional purposes, the deductions outlined in the preceding paragraph are limited to those expenses directly attributable to its professional use. In this case a fair percentage of the total automobile expenses incurred during the year may be deducted as representing the cost of maintaining the automobile for professional purposes.

If a chauffeur is employed to drive the physician's car his salary may be considered as part of the expense of maintaining the automobile and is deductible subject to the rules laid down in the two preceding paragraphs.

(c) Salaries of Assistants.

Salaries paid to nurses, laboratory assistants, stenographers and clerical help may be deducted by the physician as long as their duties are entirely within the scope of the physician's professional capacity. If a maid is employed both to take care of his office and to assist in his home, however, only that portion of her salary earned in taking care of the office may be deducted.

(d) Medicines, Instruments and Supplies.

The cost of medicines and supplies actually used during the year may be deducted from gross income for assessment purposes. The cost of medical instruments of a life of less than one year may be deducted also as an expense.

Medical instruments with a life in excess of one year, however, may not be deducted. The cost of such instruments constitutes a capital expenditure and should be depreciated. Depreciation actually sustained on medical instruments and computed at a fair rate may be

deducted from gross income. No fixed rates of depreciation has been laid down for assets of this character and the use to which the asset is subjected will govern. In determining this rate, however, loss in value due to use, wear, and tear alone will govern, and no loss in value, due to equipment becoming out of date can be considered. (e) *General Office Expense.*

Expenditures for telephone, heat, light and water used within the professional scope of the physician may be deducted. Likewise a fair rate of depreciation on office furnishings and fixtures may be deducted. The ordinary rate of depreciation for assets of this character is 10%.

(f) *Library.*

A fair rate of depreciation on the physician's library may be deducted covering wear and tear sustained through use. In determining the rate, however, obsolescence may not be considered since the Wisconsin Income Tax Law does not recognize losses in value due to such causes. The fact that medical books become out of date during the course of ten years can not be considered in determining the rate of library depreciation.

(g) *Taxes and Licenses.*

All taxes and licenses incident to the professional scope of the physician may be deducted. The following taxes would be deductible by any physician:

- (1) Real property taxes paid on office owned by him and used by him in his practice.
- (2) Personal property taxes paid on his apparatus and equipment.

(3) Income taxes paid.

(4) All license fees incident to his profession.

(5) Automobile licenses on automobiles used exclusively in the practice of his profession.

(h) *Professional Dues.*

Professional dues paid to professional associations to which the physician may belong in the interest of his profession may be deducted as well as subscriptions to all medical journals and scientific publications. Expenses involved in attending annual meetings of professional societies may be deducted if that is the sole purpose of the expenditure. If attending the meeting was only incidental in incurring the expenditure, such expenditures are not deductible.

(i) *Losses on Bad Accounts.*

If the physician has consistently kept his books on a "Cash Receipts and Disbursements" basis and has consistently reported his income in the same manner he may not deduct unpaid debts. Under this system he reports as income only such items as have actually been collected and all unpaid fees both good and bad have already been excluded from gross income.

If a physician has kept his books and reported his income on an "Accrual Basis" (reported as income all fees for services during the year both collected and uncollected and has deducted as expense all items whether actually paid or not) he may deduct all debts definitely ascertained to be worthless in the year covered by the report.

LAWS AND RULINGS GOVERNING MEDICAL LICENSURE IN WISCONSIN

For a complete statement of laws on "Treating the Sick" the members are referred to The Journal for September and October, 1925. In general, all desiring to treat the sick must first secure a certificate of registration from the State Board of Examiners in the Basic Sciences prior to making application for license to practice. Certificate may be secured by examination or reciprocity. The Board meets four times each year. The Secretary is Prof. M. F. Guyer, Department of Zoology, University of Wisconsin, Madison.

A license to practice medicine and surgery is obtained by reciprocity or examination from the State Board of Medical Examiners, Dr. Robert E. Flynn, State Bank Building, La Crosse, Secretary. Examinations are conducted in January and June. Applications with all required credentials must be completed two weeks prior to date of examination. Applicants are advised to

secure copy of regulations from the Secretary of the Board for complete information.

Under no conditions will the Board grant a temporary permit to practice.

Wisconsin has reciprocity with the following states: Alabama, Arkansas, California, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Minnesota, Montana, Nevada, New Jersey, New York, North Dakota, Ohio, Oklahoma, Tennessee, South Dakota, Vermont, Virginia, Washington, and West Virginia. (Note—Some of these states require that the applicant take the practical examination. In those instances a similar requirement prevails for applicants from such states who desire to enter Wisconsin.)

Applicants from foreign countries must comply with special regulations.

FEATURES OF FEDERAL PROHIBITION ACT AFFECTING MEDICAL PRACTICE

Wisconsin is divided into two permit districts, eastern and western. Counties in the eastern district are: Brown, Calumet, Dodge, Door, Florence, Forest, Fond du Lac, Green Lake, Kenosha, Kewaunee, Langlade, Manitowoc, Marinette, Marquette, Milwaukee, Oconto, Outagamie, Ozaukee, Racine, Shawano, Sheboygan, Walworth, Washington, Waukesha, Waupaca, Waushara and Winnebago. All other counties comprise the western district.

Headquarters for the eastern district are at 303 Transportation Building, Chicago, with a director in charge at the Gross Building, Milwaukee. Headquarters for the western district are at the Federal Building, St. Paul, with a director in charge at the Federal Building, Madison. All communications and applications should be addressed to Federal Prohibition Administrator, at Chicago or St. Paul, depending on district in which the writer resides.

Any physician licensed by the State Board of Medical Examiners to practice medicine in the State of Wisconsin, and actively engaged in the medical profession, may, upon application, receive a permit from the federal government authorizing him to prescribe intoxicating liquors for medicinal purposes, and also, to procure a limited amount of whiskey for office emergency cases, and a limited amount of alcohol for other than internal use.

PROCEDURE TO OBTAIN BASIC PERMIT

A physician who desires to obtain a basic permit to prescribe or to procure intoxicating liquors for office use will, upon request, be furnished with the regular application Form 1404, which reads as follows:

"The undersigned hereby makes application for a permit to:

"1. Prescribe intoxicating liquors for medicinal purposes to persons under his personal medical treatment, supervision and attendance in accordance with the United States Laws and Regulations.

"2. Procure six quarts of liquor during one calendar year—such liquor to be administered to patients for medicinal purposes only, in cases of emergency.

"3. Obtain alcohol to be used in compounding medicines; alcohol also to be used for sterilizing instruments and other than internal purposes. Quantity for these purposes not to exceed 5 wine gallons during a calendar year."

This application must be executed in triplicate, according to directions which are given the physician in a letter which is enclosed with the application blanks. The subject matter of the application should be read carefully, and a checkmark should be placed at each paragraph which describes a privilege the physician wishes to obtain. If the first paragraph only is checked, the permit will authorize the physician to prescribe only. If the physician should later in the year wish to obtain whiskey and alcohol for office use, he may apply for an amendment to his permit. However, the additional work and delay of having his permit amended may be avoided by the checkmarking of all three paragraphs at the time of making application, the actual purchase of the liquor to be made at any time during the year as the physician finds it necessary.

DURATION OF PERMIT

Permits issued before September 1st of any year, become effective at once and expire on December 31st of that year. Permits issued after September 1st, become effective at once and remain in force until December 31st of the next year.

USE OF PRESCRIPTION BOOK

When a physician receives his first permit to prescribe, he, at the same time, receives a prescription book containing one hundred prescriptions printed by the government on special watermarked paper. If upon examination the physician finds his patient to be suffering from some specific ailment for which, in his opinion, intoxicating liquor is the best remedy, (the prescribing of liquor except in such cases is a violation of law), he will write on the prescription with pen or indelible pencil, his federal permit number, the actual

date of issuance of prescription, the full name and address of the patient, the name and address of the druggist upon whom drawn, his own full name and address and the amount and kind of liquor prescribed. The amount of liquor must not exceed the amount actually needed in the treatment of the specific ailment for which the prescription is written. The regulations provide also—"That only spirituous and vinous liquor may be prescribed for medicinal purposes, and all permits to prescribe and prescriptions for any other liquor shall be void. No physician shall prescribe nor shall any person sell or furnish on any prescription, any vinous liquor that contains more than 24 per centum of alcohol by volume, nor shall anyone prescribe or sell or furnish on any prescription more than one-fourth of one gallon of vinous liquor, or any such vinous or spirituous liquor that contains separately or in the aggregate more than one-half pint of alcohol, for use by any person within any period of ten days."

Each prescription is attached to a stub, and the information entered on the stub furnishes a complete record of the use made of the prescription. A prescription book must last at least 90 days (the general rule—rare exceptions) and, unless recalled by the director, the prescriptions in any book may be used during a period of a year or two or longer. When all prescriptions in a book have been issued, the book of stubs must be returned to the director's office to be examined and placed on file. If the stubs show a legitimate use of the blanks, the director will issue and forward the physician a new prescription book.

RECORD BOOKS

Every physician who issues prescriptions for intoxicating liquor, must keep a record of each prescription issued in a special record book furnished upon request by the director. Full instructions as to the keeping of these records are printed on the first page of the book.

PROCEDURE FOR OBTAINING WHISKEY AND ALCOHOL

With every basic permit to procure whiskey and alcohol there is forwarded a blank Form 1410 to be used by the physician when he is in need of liquor for office use. Complete instructions for using it are printed on the back of the form. The form when executed, is returned to the office of the prohibition director. If approved by him, the vendee's copy of the permit to purchase is forwarded to the physician, who in turn forwards it to the druggist of whom he wishes to make the purchase. The druggist having received from the director the proper permit to sell this amount of liquor to this particular physician, fills the order as soon as he receives the vendee's copy from the physician.

FEEES

The federal government charges no fee for permits issued under the National Prohibition Act.

POINTS TO REMEMBER

1. You must return your federal permit for amendment if you change your office address.
2. The physician issuing the prescription must *personally* fill in all data that is required. It is not permissible for an assistant to fill in a blank and then have the physician sign it.

3. Only one pint of whiskey may be prescribed for the use of an individual within any period of ten days.
4. A physician may prescribe up to the following limits:
 - A. Alcohol—one-half pint.
 - B. Whiskey, gin or rum—one pint.
 - C. Wine—one quart.
5. You must first obtain your federal permit and, second, after receiving your federal permit you must secure the state permit.

6. Having indicated on a prescription blank the name of a druggist where the prescription is to be filled, the patient receiving the prescription is not permitted to go elsewhere. If the druggist named is unable to fill the prescription he must endorse it over to a second druggist and the original druggist must enter in his record book the fact that he did so endorse a prescription of that number, entering the name of the druggist to whom the patient was sent.

WISCONSIN NEW SINGLE PERMIT LAW EXPLAINED

As result of presentation by the State Medical Society, the 1925 Wisconsin legislature amended the "separate permit" provision of the state prohibition enforcement act. Formerly three separate and distinct permits were necessary, namely, (1) Class A state permit to prescribe liquor only. An annual fee of \$10 was required. (2) Class B state permit to obtain up to six quarts of liquor for emergency medicinal purposes and up to five gallons of grain alcohol for manufacturing purposes, tinctures, etc. An additional fee of \$10 was required. (3) Class C state permit to use alcohol for sterilizing purposes, only.

NEW SINGLE PERMIT LAW

For 1926, physicians may obtain all the privileges in a single permit on payment of a single \$10 fee. The new law, effective January 1, 1926, grants to physicians, subject to the provisions of the State Prohibition Act and rules and regulations by the State Prohibition Commissioner, the privilege, (A) to prescribe liquor, (B) to procure liquor to be administered to patients for medicinal purposes in case of emergency, (C) to obtain liquor to be used in compounding medicines, and (D) to procure alcohol to be used for sterilizing instruments and for manufacturing tinctures, preparations and the like.

No permits will be granted to physicians for 1926

until they have complied with the provisions of the State Prohibition Act for 1921, 1922, 1923, 1924 and 1925 if they were subject to the act in any or all of those years. Applications will be mailed to all physicians holding a permit in 1925. Others may apply to the State Prohibition Commissioner, State Capitol, Madison. Checks should be made payable to the Commissioner.

The physician must fill out the application, print or have typewritten his name and address, insert his Federal Permit Number, obtain the approval of his District Attorney, sign and return application to the Commissioner before a state permit will be issued.

Prescriptions for intoxicating liquors may be issued only as provided in the National Prohibition Act. No such prescription may be issued for a minor unless necessary for health, such necessity to be attested to in a certificate in writing delivered by the physician to the parent or guardian of such minor (Sec. 165.01.9).

Prescriptions by Intoxicated Persons. Any physician, while in a state of intoxication, who shall prescribe any poison, drug or medicine to another person shall be punished by imprisonment in the county jail for not more than one year or pay a fine not exceeding \$500 (Sec. 4603).

PHYSICIANS MUST COMPLY WITH MANY STATE HEALTH LAWS AND RULINGS

COMMUNICABLE DISEASES

CONTAGIOUS DISEASES, suspected cases, etc. Conveyance, or permission for conveyance, of any case of dangerous, communicable disease by public vehicle or to any public place, particularly as it may subject other persons to contracting such disease, shall be cause for arrest and punishment as provided in Section 4608d.

VACCINATION FOR SMALLPOX. When vaccination or exclusion from school is ordered in times of epidemic, the local board of health shall provide for the free vaccination of all children in any school district or part thereof during such outbreak, the expense to be borne by the district. Parents may employ physicians of their choice to perform such vaccinations and shall pay the expense incurred (Sec. 40.71).

PRINTED REPORT FORMS. The blanks to be used by physicians and others in reporting cases of dangerous communicable disease to the health officer are furnished by the State Board of Health to the local health officers

for distribution among the physicians and other persons residing in their district.

EXPENSE OF CULTURES. The expense of taking release cultures after recovery from diphtheria and the disinfection of persons and premises is a part of the expense of maintaining quarantine and must be paid by the town, village or city. The release cultures must be taken by or under the direction of the local health officer (Attorney General's opinion).

QUARANTINE OF PHYSICIAN. If a physician's home is quarantined, he may remain as a member of the family and is then subject to the quarantine as other persons are, or he may live outside and visit his home in the capacity of a physician (Attorney General's opinion).

REPORTING OF CASES. A physician is required to report in writing within 24 hours all cases of communicable disease to the health officer (Sec. 143.04). (All suspicious cases must be reported and treated as positive until a correct diagnosis can be made. Any neglect or

refusal of a physician or householder to report cases of communicable disease makes him liable to a severe fine.)

QUARANTINABLE DISEASES. Cerebrospinal meningitis (epidemic), cholera (Asiatic), diphtheria, infantile paralysis, plague, scarlet fever, smallpox, typhus fever, yellow fever.

PLACARDABLE DISEASES. Chickenpox, influenza, leprosy, measles, German measles, typhoid fever, whooping cough.

REPORTABLE ONLY. Erysipelas, lethargic encephalitis, mumps, ophthalmia neonatorum, pneumonia, trachoma, tuberculosis.

POSTING OF LIST. The official list of communicable diseases is required to be posted in every physician's office (also in every hospital). (Sec. 143.04). The list is furnished free on cardboard by the State Board of Health.

DIAGNOSIS. In diagnosing communicable diseases, physicians shall use ordinary skill and bacteriological examination if that is of value in determining the true condition (Sec. 143.04).

PENALTY. For violation of any of the above laws, except that concerning posting of diseases, physicians are liable to fines ranging from \$5 to \$100, or imprisonment, or both; and for a second offense are subject to suspension of their license to practice for one year (Sec. 143.04.3).

PRIVILEGE UNDER QUARANTINE. Physicians are among the few individuals specified by law as permitted to enter premises quarantined for communicable disease (Sec. 143.05).

TUBERCULOSIS. Every physician is required to report within one week cases of tuberculosis in his care or under his observation. The report shall contain the name and address, age, sex, and occupation. The physician shall notify the health officer within 24 hours of the vacation of any place by death from tuberculosis or by removal of a consumptive (Sec. 143.06).

VENEREAL DISEASE. All physicians and certain institutions are required to report directly to the State Board of Health all cases of venereal disease in a communicable state that come to them for treatment (Sec. 143.07).

A printed form, furnished by the State Board of Health, is used for reporting, and a serial number, not the name of the patient, may be given to each case. Printed instructions for the patient are attached to this report blank and are required to be given to him. Secrecy is imposed upon the State Board (Sec. 143.17.7).

The State Board of Health requires that the source of infection be inquired into and reported back to the Board for the purpose of investigation. All persons having a venereal disease must remain under treatment until no longer communicable. Discontinuance of treatment may be the cause for commitment to an institution until no longer communicable (Sec. 143.07.2, 4, 5).

Arsphenamine and neo-arsphenamine are furnished occasionally free to doctors for indigent cases where the doctor desires to give the treatment without compensa-

tion. Physicians having patients unable to pay for treatment for venereal disease may assign such individuals for treatment at state clinics.

When such a patient refuses treatment the physician shall notify the State Board of Health, giving particulars, to enable the Board to act to have the person committed for treatment (Sec. 143.07.5).

When a physician has reported a case of venereal disease to the State Board of Health, all questions regarding the presence of the disease and the date from which treatment was neglected shall not be regarded as privileged information when the patient or physician is called upon to testify to the facts before any court of record (Sec. 143.07.7).

Physicians shall be furnished free of charge with the results of examinations for the diagnosis of gonorrhoea made by any state laboratory, and of examinations of blood or secretions for the diagnosis of syphilis from the state psychiatric institute (Sec. 143.07.10).

INFANT BLINDNESS. The attending physician (or midwife) is required to use a one per cent silver nitrate solution in the eyes of newborn babies. For the prevention of ophthalmia neonatorum the State Board of Health is required to supply the solution free to every physician (and midwife), put up in proper containers and distributed to health officers for delivery to practitioners.

When ophthalmia neonatorum appears in any newborn babe not attended by a physician or midwife and the case is reported, as required, to the health officer, a competent physician shall be employed by the municipality to examine and treat the case as directed in the instructions accompanying the solution. The penalty for violation of any part of this law is a fine up to \$100 (Sec. 146.01).

VITAL STATISTICS

REGISTRATION WITH LOCAL REGISTRARS. Upon locating for the practice of medicine, physicians are required to register their name, address and occupation with the local registrar of vital statistics, and by him be supplied with the laws, rules and regulations for the enforcement of the vital statistics law (Sec. 147.03).

REGISTRATION OF BIRTHS. Physicians shall file within five days certificates of births attended by them. Such reports are to be made to the local registrar of the district in which the births occur. All particulars shall be given in the space provided. All bills or charges for professional services rendered in connection with confinements are declared unlawful and need not be paid until the birth certificate, properly filled out, is filed as provided in Sec. 69.26.

ILLEGITIMATE BIRTHS. In the case of a child born out of wedlock, the physician shall not fill in the name of the supposed father until legal proceedings shall have adjudged the paternity of the child (Sec. 69.28.21).

CERTIFICATE OF BIRTH BEFORE CHILD IS NAMED. When a certificate of birth is presented without the given name, the local registrar shall make out and deliver to the parents a special blank for the supplemental report of such given name (Sec. 69.30).

STILLBIRTHS, REGISTRATION REQUIRED. In stillbirths the attending physician shall register the children as births and deaths, with the explanatory word "still-birth." The medical certificate shall state the cause of birth as "stillbirth," if known; whether a premature birth; and, if born prematurely, the period of utero-gestation in months, if known (Sec. 69.32).

REPORT OF CONGENITAL DEFORMITIES. Physicians shall report to the State Board of Health within 24 hours after the birth of any child with a deformity or physical defect, such report to be separate from and in addition to the birth certificate, and shall explain fully the nature of the defect. They may also make suggestions and recommendations as to the care, treatment or correction of such deformities or defects (Sec. 69.29).

REGISTRATION OF DEATHS. Physicians shall make and sign certificates of deaths occurring in their practice, giving such data as are called for in the certificate form. The certificate shall be made by the physician last in attendance, and shall specify the time in attendance, the time he last saw the deceased alive, and the hour of the day when death occurred. He shall further state the cause of death so as to show the course of disease or sequence of causes resulting in death, giving the primary and immediate causes, and also the contributory causes, if any, and the duration of each. Causes of death which may be the result of either disease or violence shall be carefully defined, and, if from violence, its nature shall be stated, and whether accidental, suicidal or homicidal. In case of deaths in hospitals, institutions, or away from home, the physician shall furnish the special information required, and shall state where in his opinion the disease was contracted. The cause of death and all other facts shall in all cases be stated in accordance with the rules and regulations of the state registrar (Sec. 69.36).

DEATH WITHOUT PHYSICIAN. In the absence of a physician at death, any physician may be employed for the purpose of making a proper death certificate, upon request of the local registrar (Sec. 69.37).

CORONER'S DUTY. A coroner cannot enter the cause of death except in cases where a coroner's inquest is held (Attorney General's opinion).

CHARGE FOR CERTIFICATE PROHIBITED. A physician is prohibited from making a charge for filling out the certificate of the cause of death, under penalty of a fine (Attorney General's opinion).

GENERAL

STATE LABORATORY OF HYGIENE. Physicians shall be furnished free of charge with results of laboratory analyses of specimens sent for determining diagnosis of disease (Sec. 36.225). These laboratories include the central laboratory in Madison, branch laboratory at Rhinelander, and cooperative laboratories at Oshkosh, Green Bay, Superior, Beloit, Kenosha, and Wausau.

The materials which are examined in these laboratories are sputum for tubercle bacilli, swabs for diphtheria bacilli and other organisms, pus for gonococci and other organisms, central nervous systems of dogs and other animals for Negri bodies diagnostic of rabies, spinal fluid for meningococci and other organisms.

materials in suspected cases of anthrax, glanders and actinomycosis, blood, feces and urine for the diagnosis of typhoid fever, or to detect carriers of these germs, and chemical and bacteriological examinations of water to detect its fitness for drinking purposes. The cooperative laboratories are required to do tissue examinations for the diagnosis of malignancy. Such tests are made free for physicians.

STATE BIOLOGICAL PRODUCTS. Under the law, local boards of health are required, under the direction of the State Board, to furnish antitoxin free to indigents suffering from certain communicable diseases. Diphtheria antitoxin, tetanus antitoxin, smallpox vaccine, diphtheria toxin for Schick test, combination Schick test and control outfit, diphtheria toxin-antitoxin mixture, anti-meningococcus serum and anti-rabic serum are furnished to localities at special prices made possible by the State Board of Health by arrangement with the manufacturers. Distributing stations for these products are located in every county.

WASSERMANN TEST FREE. Upon application to the State Board of Health, physicians may arrange to have the psychiatric institute give the Wassermann test for their patients, or to make chemical examinations of the cerebrospinal fluid, free of charge (Sec. 46.13).

VENEREAL DISEASE, INDIGENTS. The county is required to pay for the care and treatment of indigent persons afflicted with a venereal disease (Attorney General's opinion).

DRUGS LIMITED TO PRESCRIPTIONS. The sale of prescription or recommendation of any drug for the treatment of venereal diseases may be done only through written prescription issued by a licensed physician (Sec. 143.07.11).

INFORMATION. Section 146.15 requires that physicians of mining, manufacturing and other companies, and certain officials, shall upon request furnish to the State Board of Health any information touching the public health, and for refusal shall forfeit ten dollars.

CORPSES, DUTY OF PHYSICIAN. Disinterred corpses are declared dangerous to health and may not be transported unless authorized by a permit from the health officer, showing name, age, place, and medical attendant. Local health officers shall refuse permit when the cause of death is given as heart failure unless the physician in charge states that the cause was not diphtheria (Sec. 155.01).

PRIVILEGED COMMUNICATIONS. No physician shall be permitted to disclose any information acquired in attending any patient professionally. In any civil action brought by such patient or criminal proceeding for malpractice, whenever such patient shall have first given evidence relating to such information the physician may disclose such information as a witness in his own behalf. Such disclosure also is permitted with the written permission of the patient, or of his relatives in case of the patient's death.

PHYSICIAN PROTECTED FROM LIABILITY. A physician who reports to the State Board of Health the name of a person afflicted with a venereal disease on account of such person not continuing treatments until the disease

is no longer communicable will be protected from liability, if the facts justify his action (Attorney General's opinion).

INDUSTRIAL ILLNESS, OCCUPATIONAL DISEASES. Every medical practitioner shall report to the State Board of Health cases of poisoning from lead, phosphorus, arsenic or mercury or their compounds, or compressed air illness contracted in employment, giving patients' names and addresses and the type of disease suspected. A fine of \$10 is applicable for failure to comply with this section (Sec. 69.49).

PRENATAL LETTERS. Upon receipt of the name and address of expectant mothers, sent by physicians, nurses, and others, the Bureau of Child Welfare of the State Board of Health will send a series of nine monthly prenatal letters to such patients. These letters contain definite information regarding the general hygiene to be followed by the expectant mother. She is advised when to see her physician, what food to eat, how to prepare for confinement at home, and given other valuable information.

PROVISIONS OF STATE HOSPITAL ACT AFFECTING PHYSICIANS

The primary objects of the new hospital are to furnish facilities for the care of patients who now lack adequate provision, and to furnish facilities for teaching and the advancement of medical knowledge.

142.01. Public patients. A resident of Wisconsin who is afflicted with a deformity or ailment which can probably be remedied or advantageously treated, if he or the person liable for his support is financially unable to provide proper treatment.

142.02 Application. When the case of such person shall come to the notice of a sheriff, county supervisor, town clerk, health officer, health nurse, poor commissioner, policeman, physician, or surgeon, or any public official, he shall and any teacher, priest or minister may, file with the county judge an application for his treatment at such hospital.

142.03. Investigation. (1) The application shall be in such form as the county judge shall direct, and shall contain a full statement of the financial situation of the person and a general statement of his physical condition, and shall be verified. The county judge shall make investigation and the supervisor for the town, village or ward of the residence of the person shall supply to the court, on request all material information within his knowledge.

(2) The judge if satisfied that the required facts exist, shall appoint a physician of said county personally to examine the person. The physician shall make a verified report in writing, within such time as the court shall direct, setting forth the nature and history of the case, and such other information as will be likely to aid in its treatment and giving his opinion whether the condition of the person can probably be remedied, or should be treated, at a hospital, and any information within the

RULINGS ON HEALTH ADMINISTRATION

DISAGREEMENT ON DIAGNOSIS. If two or more physicians disagree upon a diagnosis of a communicable disease, what is the duty of the health officer? Answer: If the health officer is a layman, he should select a physician to make a diagnosis for him and handle the case accordingly.

TESTS FOR QUARANTINE RELEASE. If tests are required for release from quarantine, who is to make them? Answer: The health officer or someone designated by him, either a physician, nurse, or an individual especially trained to take such tests. Such material should be at once sent to a state laboratory.

SWABS, WHEN ACCEPTED. May swabbings taken by the attending physician be accepted in releasing from quarantine? Answer: No, unless the attending physician has been authorized by the health officer to make such swabbings. If so, they are accepted.

QUALIFICATIONS AS JOINT HEALTH OFFICER. A physician can legally qualify as health officer of two adjoining towns although he may live in another jurisdiction (Attorney General's opinion).

knowledge of the physician relative to his financial situation. The physician shall be paid by the county, five dollars, and actual and necessary expenses.

(3) The faculty of the medical school of the university shall prepare blanks for examining physicians. Such blanks shall be printed by the university, and mailed to each county court upon request. Physicians shall report in duplicate on said blanks, and if the application is granted one copy shall be sent to the hospital.

142.04 Findings and order. If the court shall be satisfied that the required facts exist and that the person should be treated at the Wisconsin general hospital, he shall so find and enter an order granting the application. If the court is not so satisfied, he may make further investigation. If the court does not find the required facts, he shall enter an order denying the application. Upon granting the application, he shall ascertain from the superintendent of the hospital whether the person can be received as a patient, and if he can the court shall certify his order to the hospital and to the county clerk.

142.05 Conveyance to hospital. If the patient is unable to travel alone, the court may appoint a suitable person to take him to said hospital, and such person shall receive actual and necessary expenses, and, if not a salaried officer, a per diem of three dollars per day going and returning; and the same shall be paid by the county.

142.06. Discharge of patients. When the superintendent of the hospital is of the opinion that a county patient is cured, or no longer needs treatment or cannot benefit thereby, he shall discharge the patient. If the patient is unable to travel alone, the superintendent

shall notify the county judge who shall appoint some suitable person to bring the patient back. Such person shall receive expenses and compensation as provided in section 142.05.

142.07. Hospital charges. (1) The Wisconsin general hospital shall treat patients so admitted at rates based on actual cost as determined by the board of regents of the university. Payments made by such patients shall be credited to their account. Patients may be admitted without certificate, but the cost of their care shall not be a point charge against the state and county, except when such patients are admitted in an

emergency pending action of the county court. If the court grants the application the charges against state and county shall date from his admission.

(2) No compensation shall be charged against or received from any patient by any officer of or person employed by the hospital other than the compensation provided by the board of regents of the university.

142.08. Reports; payment of charges. The net cost of caring for a certified patient shall be paid one-half by the state and one-half by the county of his residence.

For complete information see *The Journal*, September, 1924.

MAIN PROVISIONS OF WISCONSIN NARCOTIC LAW OF 1923

This stringent enactment affects the right of the physician to administer narcotic drugs, limiting their application by careful safeguards and protecting the physician in his necessary use of them for the relief of pain and suffering. Codein sales are limited to one grain, and heroin to one-eighth grain. Narcotic drugs are listed as opium, codein, morphin, heroin, and alpha or beta eucain. Prescriptions shall be kept on file for two years. Prescriptions must be written in English or Latin. They shall always be open to inspection by authorized officials.

Prescriptions must only be issued in good faith. Narcotic drugs may not be provided for any person when not needed for treatment and cure of a disease or ailment, nor for any condition arising from the drug habit. A physician may administer any narcotic drug in the legitimate practice of medicine when believed necessary for the alleviation of pain, and shall keep a complete record of the case, showing kind and amount of drugs dispensed, date, and name and address of patient, except such drugs as may be dispensed by a physician to his patient upon personal attendance.

The ailments or acute conditions specifically enumerated for which physicians may legitimately prescribe narcotic drugs include influenza, renal calculi, broken limbs, and such frequently incurable diseases as cancer, tuberculosis, etc., and for the relief of acute pain. Such drugs may not be prescribed by a physician to an addict except where the patient is being treated by him for the cure of the habit.

A physician or other person may not advertise to sell narcotic drugs or any treatment embodying drug administration.

Only a physician and other specifically authorized persons may have in their possession instruments adapted for the use of narcotic drugs. Possession by others is prima facie evidence of their unlawful use.

Anyone authorized to administer narcotic drugs to others is prohibited from administering them to himself.

Penalties for violations of these provisions are severe, ranging from fines of \$100 to \$1,000 to prison terms (Sec. 146.02).

ESSENTIAL PROVISIONS OF FEDERAL NARCOTIC LAWS

Any person who prescribes, dispenses or has narcotic drugs or preparations in his possession, must register and pay special tax under this law, if they are legally qualified or permitted to dispense or prescribe medicines or drugs under the state law. A practitioner who makes his first application for registration under this law should apply to the Collector of Internal Revenue, Milwaukee, for form No. 678A and form No. 713. On the form No. 678A he will give his state registry number and the date of its issue. The name and address of two references must also be given. All spaces calling for information must be filled in. The form should be signed and sworn to. The form No. 713, inventory, must be filled in and sent with the application form No. 678A. If the applicant has no stock of narcotics on hand, he must state so on this form. If the application for registration should cover a partnership, then each partner must file a form No. 678A, following the same procedure as stated above. If the application for registration should cover the liability of a corporation, then

each principal officer will file form No. 678A together with a copy of their articles of incorporation. The inventory form can be signed by either member or officer. All remittances must accompany the application and should be in the form of a certified check, draft or money order. The application should read as of the first of the month in which the applicant intends to do business up to June 30th next.

REREGISTRATION ON FORM NO. 678

On or about June 1st of each year, the Collector's office mails out forms Nos. 678 and 713 to each registrant. These forms must be filled in completely and returned with the proper remittance on or before July 1st of each year in which liability is incurred.

Registration under the Harrison Narcotic Law expires June 30th. It should be renewed on or before that date by physicians who desire to continue to administer, dispense or prescribe narcotics. Failure to register carries with it liability to a two thousand dollar fine or to five years' imprisonment, or both, and in any event

will subject the tardy registrant to a 25 per cent increase in his tax. Physicians who distribute, dispense or administer narcotic drugs of all kinds must register in Class 4, and pay a tax of three dollars. Physicians who dispense any of the so-called exempt preparations must register also in Class 5. A physician registered in Class 4 and registering in Class 5 also is not required to pay any additional tax because of registration in the latter class, but a physician registering in Class 5 only is required to pay a tax of one dollar. The so-called exempt narcotic preparations are defined by the Harrison Narcotic Law to include such as contain not more than 2 grains of opium, or more than one-fourth grain of morphin, or more than one-eighth grain of heroin, or more than 1 grain of codein, or any salt or derivative of any of them in 1 fluid-ounce, or, if a solid or a semi-solid preparation, in 1 avoirdupois ounce; and liniments, ointments or other preparations which are prepared for external use only, except liniments, ointments and other preparations which contain cocain or any of its salts, or alpha or beta eucain or any of their salts or any synthetic substitute for them. The exemption applies only to ready-made preparations and remedies compounded in accordance with the United States Pharmacopeia, National Formulary, or other recognized or established formula usually carried in stock by a dealer and sold without prescription. A preparation, to be exempt, must contain active medicinal drugs, other than narcotics, in sufficient quantity to give the mixture valuable medicinal qualities other than those possessed by the narcotic drug alone. Simple dilutions of narcotic drugs made by mixing them with inert or nearly inert substances are not within the exemption.

Physicians should study carefully the scope of the definition of the so-called exempt narcotic preparations stated above, and should determine whether they dispense any of them. If they do, registration in Class 5 is necessary, and with such registration goes the obligation to keep a record of all the so-called exempt narcotic preparations dispensed. Paradoxical as it may seem, the physician who dispenses such relatively inert preparations will find himself compelled to keep a record of such as he distributes even to bona fide patients on whom he is in professional attendance, whereas he may dispense the more potent narcotic drugs without being required by law to keep any record of them. This situation has been brought about, however, by legislation enacted by Congress in 1918, and it can be altered only by Congress. The Commissioner of Internal Revenue is simply discharging his duty when he enforces the law.

At the time of applying for registration or reregistration, the physician must file an inventory of all narcotic preparations he has on hand. If he is registered in Class 4 only, the inventory must include all taxable narcotic drugs and preparations on hand in the physician's regular dispensing stock, if any. If he is registered in Class 5, he must file a separate inventory, but this need not include the so-called exempt narcotic preparations, but only such taxable narcotic drugs as

may have been set aside for the purpose of the manufacture of such exempt preparations and remedies. If no preparations except such as are within the exempt class are on hand, the inventory must be filed, nevertheless, and across its face should be written, "Nothing on hand." Proper forms for the preparation of inventories will be furnished by the collector of internal revenue with whom registration is to be effected.

INVENTORIES

Inventories can be taken on any date after January 1st. This inventory can then be listed on Form No. 713 as of that date. If the proper application forms are not received by a registrant he should apply to the Collector's office for a duplicate set.

SPECIAL TAX STAMPS

After the application has been received with the proper remittance in the Collector's office, a special tax stamp will be issued covering the period for which tax has been paid. This special tax stamp must be posted in a conspicuous place in the taxpayer's office or place of business. Should a special tax stamp become lost or mutilated, the taxpayer should file an affidavit to this effect with the Collector so that a certificate in lieu of the special tax stamp can be issued. In the event that a taxpayer changes his address, he should apply for Form 678, transfer, within the month in which such change takes place.


NARCOTIC ORDER FORMS

Any narcotic drugs purchased by a registrant under the narcotic law must be purchased on an official order form from a wholesaler or a manufacturer. The only items that a retail dealer can sell on an official order form is a one ounce aqueous solution. The practitioner should never issue a prescription for narcotics for his own office use. In order to obtain the proper narcotic order forms, the registrant should apply to the Collector of Internal Revenue for form No. 679. This form must be filled in completely and returned with a remittance of ten cents. When issuing a form to a wholesaler or manufacturer or to a retail dealer for an aqueous solution, the registrant must personally sign this form. Clerks or other office help cannot sign these forms unless the proper power of attorney has been filed with the Collector's office. Care should be exercised in executing these orders. Where narcotic order forms are lost or stolen, a report should be made immediately.

PRESCRIPTIONS

A prescription is a form authorized by the Commissioner of Internal Revenue, approved by the Secretary of the Treasury to legalize the possession of narcotic drugs only where the prescription is issued by a duly registered practitioner to his patient. A prescription must never be used for purchasing office supplies. Prescriptions must only be issued for legitimate medical purposes. When issued to an addict to supply him with his regular amount of narcotics to keep him comfortable, it would be a violation of the Harrison Narcotic Law. Practitioners who issue such prescriptions, the person filling same, and the person receiving the

(Continued on page XXIV.)



THE JOURNAL BOOK SHELF

Bacteria in Relation to Man. By Jean Broadhurst, Ph.D., Associate Professor of Biology, Teachers College, Columbia University. A Study-Text in General Microbiology. Octavo, 147 illustrations, 304 pages. J. B. Lippincott Company, Philadelphia and London. Price, \$3.00.

A Text-Book of General Bacteriology. By Edwin O. Jordan, Ph.D., Professor of Bacteriology in the University of Chicago and in Rush Medical College. Eighth edition, thoroughly revised. Octavo of 752 pages, fully illustrated. W. B. Saunders Company, Philadelphia and London, 1924. Cloth, \$5.00, net.

The Health-Care of the Baby. A handbook for mothers and nurses. By Louis Fischer, M.D., Attending physician to the Willard Parker and Riverside Hospitals; Chief attending pediatricist to the Zion Hospital of Brooklyn; Medical director of the Infantorium. Fifteenth edition, completely revised. Funk & Wagnalls Co., New York and London, 1925.

BOOKS RECEIVED FOR REVIEW

Physiotherapy, Theory and Clinical Application. By Harry Eaton Stewart M.D., President-elect American Academy of Physiotherapy; Attending Specialist in Physiotherapy, U. S. Marine Hospital, N. Y. Price \$7.50. Paul B. Hoeber, Inc., New York.

Submucous Endocapsular Tonsil Enucleation. With discussion of the evolution of knowledge of the tonsil as a disease producing factor and various methods of enucleation. Excerpts from Clinics of Charles Conrad Miller, M.D. The Oak Printing & Publishing Co., Chicago.

Writing of Medical Papers, The. By Maude H. Mellish, Editor of the Mayo Clinic Publications. Second edition, revised. Pages, 168. Cloth, \$1.50 net. W. B. Saunders Company, Philadelphia and London.

The Surgical Clinics of North America. Chicago number, August, 1925. Volume V, Number IV. Pages, 246, with 54 illustrations. Paper, \$12.00; cloth, \$16.00 net. W. B. Saunders Company, Philadelphia and London.

Methods and Problems of Medical Education. Third series. Division of Medical Education, The Rockefeller Foundation, New York, 1925.

A History of the Massachusetts Medical Society. With brief biographies of the founders and chief officers, 1781-1922. By Walter L. Burrage, M.D., Secretary of the Society. Illustrated with views of some of the meeting places, reproductions of old documents and portraits of important officers.

Eye Sight Conservation. Bulletin 7, issued by the Eye Sight Conservation Council of America, Times Building, New York City. Compiled by Joshua Eyre Hannum, M.E., Research Engineer.

Medical Clinics of North America. Volume IX, No. III, New York number, November, 1925. Octavo of 312

pages, with 72 illustrations. Paper \$12.00; cloth \$16.00 net. W. B. Saunders Company, Philadelphia and London.

A Textbook of Physiology. By William D. Zoethout, Ph.D., Prof. of physiology in the Chicago College of Dental Surgery (Loyola University) and in the Chicago Normal School of Physical Education. Second edition. Price \$4.50. C. V. Mosby Company, St. Louis, 1925.

The Therapy of Puerperal Fever. By Privatdozent Dr. Robert Koehler. American edition prepared by Hugo Ehrenfest, M.D., Associate in Obstetrics, Washington University School of Medicine, consulting obstetrician to St. Louis Maternity Hospital, St. Louis. With 27 illustrations. Price \$4.00. C. V. Mosby Company, St. Louis, 1925.

The Medical Follies. By Morris Fishbein, M.D., editor of the Journal of the American Medical Association. An analysis of the foibles of some healing cults, including osteopathy, homeopathy, chiropractic, and the electronic reactions of Abrams, with essays on the antivivisectionists, health legislation, physical culture, birth control, and rejuvenation. Boni and Liveright, New York, 1925.

Chemical Pathology. Being a discussion of general pathology from the standpoint of the chemical processes involved. By H. Gideon Wells, M.D., professor of Pathology in the University of Chicago and in the Rush Medical College. Fifth edition, revised and reset. Octavo of 790 pages. Cloth, \$8.50 net. W. B. Saunders Company, Philadelphia and London, 1925.

A Textbook of Medical Diagnosis. By James M. Anders, M.D., Prof. of Medicine, Medico-Chirurgical College, Graduate School of Medicine, University of Pennsylvania; and L. Napoleon Boston, M.D., Associate professor of Medicine, Graduate School of Medicine, University of Pennsylvania. Third edition, entirely reset. Octavo of 1422 pages, 555 illustrations. Cloth, \$12.00 net. W. B. Saunders Company, Philadelphia and London, 1925.

Applied Biochemistry. By Withrow Morse, Ph.D., Prof. of Physiological Chemistry and Toxicology, Jefferson Medical College, Philadelphia. Octavo of 958 pages with 257 illustrations. Cloth, \$7.00 net. W. B. Saunders Company, Philadelphia and London, 1925.

Thoracic Surgery. The surgical treatment of thoracic disease. By Howard Lilienthal, M.D., Prof. of clinical surgery at Cornell University Medical School. Two octavo volumes totaling 1294 pages, with 904 illustrations, 13 in colors. W. B. Saunders Company, Philadelphia and London, 1925. Cloth, \$20.00.

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BOOK REVIEWS

WILLIAM A. MOWRY, M. D.,
Editor

Any scientific publication reviewed in this column may be obtained for inspection. Orders for such inspection should be directed to Mr. W. M. Smith, Librarian, Medical Library, University of Wisconsin, Madison, and should be placed through your local librarian wherever possible. Where there is no local librarian orders may be sent direct. These new books will be loaned for an inspection period only.

Diseases of Bronchi, Lungs and Pleura. By Fred-erick T. Lord, M.D. Lea & Febiger, Publishers, Philadelphia and New York. Second Edition, Thoroughly Revised, With the Addition of a Chapter on Pulmonary Tuberculosis. Illustrated with 107 Engravings and 3 Colored Plates.

The second edition of this standard text is an essential reference text for all internists. Its organization is excellent and its bibliography comprehensive. The emphasis laid on roentgenologic aids is noteworthy. There is a perceptible broadening of the outlook of internists in this direction with reference to the diagnosis and prognosis of diseases of the chest. The reviewer would criticize the rather sweeping assertion made in reference to the ability to diagnose activity or inactivity from the roentgenograms. The qualifying "likely" and "usually" on page 244 are apt to be overlooked by the unobserving, and the differentiation between the active and inactive tuberculous lesion expected of the roentgenologist. Practically this responsibility must still rest upon the internist and the roentgenogram may only indicate by "softness" or "hardness" of abnormal densities, the recent, continued or remote, organizing tendency of the lesion.

As in all texts dealing with subjects of great interest and varying personal experiences, exceptions will be taken; but these differences in no sense detract from the worth of the subject matter in general. The use of morphine in bronchial asthma is certainly reprehensible. The value of disinfection of quarters occupied by tuberculous patients with formaldehyde gas is admittedly a futile gesture. In our experience, movement of patients suffering from lobar pneumonia to investigate the back, in the absence of suggestive changes clinically, is meddlesome and may be dangerous. Too much stress cannot be laid upon the quality of the pulmonary second sound as evidence of myocardial efficiency in pneumonia. In our experience, venesection has a real field of usefulness in cardiac failure of pneumonias with elevated venous pressure.

The relatively slight attention given to pulmonary ascariasis, pulmonary spirochaetosis and diseases or conditions affecting the diaphragm again constitutes a question of personal judgment. On the whole, the author and publishers have presented an excellent addition to our literature on diseases of the chest.—W. S. M.

Proceedings of the International Conference on Health Problems in Tropical America. Held at Kingston, Jamaica, B. W. I., July 22nd to August 1st,

1924, by Invitation of the Medical Department, United Fruit Company. United Fruit Company, Publishers, Boston, Massachusetts. 1924.

One of the most interesting books of recent publication, representing the experience and opinion of outstanding figures, men whose investigations have made real contributions to our knowledge of tropical diseases.

A glance at the names of the contributors and those taking part in the discussion is sufficient to speak for the value of the book. All medical men can read this volume with benefit; those living in the southern states should read it; those in the tropics are obliged to read it if they would have the knowledge gained by pioneers in the study of tropical medicine and hygiene.—B. H. H.

A Compend of Genito-Urinary Diseases and Syphilis, Including Their Surgery and Treatment. Fourth Edition, Revised. By Charles S. Hirsch, M.D. P. Blakiston's Son & Co., Publishers, Philadelphia.

This is rather a comprehensive outline of genito-urinary diseases and syphilis, containing a great deal of valuable advice. It is a commendable treatise for the general practitioner who desires practical information concerning the treatment and care of urologic conditions.—B. H. H.

Principles of Surgery for Nurses. (Illustrated.) By W. S. Woolf. W. B. Saunders Company, Publishers, Philadelphia and London.

This book provides for nurses a simple statement and explanation of surgical affections. It meets the demand for something less than a textbook. The substance of the book gives the broad principles only, so it would be necessary for the reader to use additional facts, for a more comprehensive view of any subject discussed.

The summary at the end of each chapter is a valuable feature.—B. S. M.

Physical Chemistry in Biology and Medicine. Octavo of 425 pages, Illustrated. 1925. By J. F. McClendon, Ph.D., and Grace Medes, Ph.D. W. B. Saunders Company, Publishers, Philadelphia and London.

This book resembles in some ways the earlier book by Dr. McClendon on the Physical Chemistry of Vital Phenomena. The book states frankly in its preface that it is not a text nor a complete treatise. It is intended for research workers in Biology and Medicine. It is written with the hope, as stated by the authors, of encouraging research workers to make good the deficiencies in their training in this particular field. It would, therefore, not be of great interest to clinicians or to beginning students in the medical course.

Even for the purpose stated by the authors, the book is of doubtful value. The presentation of the subjects is rather brief and fragmentary. The fundamentals are not discussed in orderly fashion and a comprehensive idea is difficult to secure on any topic concerned. The authors have in some cases included rather detailed precautions as to methods in which they were personally interested while other phases of physical chemistry of equally great importance are dismissed with a few lines. The book will not be considered authoritative by research workers who want real information.

(Continued on page 446.)

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OH, DOCTOR, DOCTOR!

By H. A. J.

I have received many advertising circulars through the mail—everything from an appeal to buy a fur coat, which I can't afford, to the offer of a set of lecture notes, which I don't need—but none of them ever smote the heart with such poignant entreaty as the following letter, which came to me a few days ago.

"Dear Sir:

"William J. Bryan said: 'Grape juice will make a real drink for the American people.' For once, Bryan was right! Congressman John Philip Hill of Baltimore, a Harvard man, *bought a keg and PROVED it.*

"YOU, TOO, can buy a keg from a responsible corporation, a cunning little keg that goes snugly under a bed or beside a radiator. From it, without troublesome formulas, and without more effort than removal of the bung, you can obtain a real drink for a real he-man—one that is absolutely pure, of excellent flavor and possessing every property that a gentleman of discrimination demands in a beverage.

"You can buy, too, at no more than pre-war price for beverages of like excellence, under an ironclad guarantee of satisfaction or money back.

"No salesman will follow your request for particulars, mailed on the enclosed card, and full information will come to you privately, in plain envelope securely sealed.

"Mail the card today.

Sincerely yours,"

Under the signature was the notation "New England Distributor." which apparently indicates that this is more than a merely local house-to-house business. But I have not yet mailed the card to get the full particulars in a plain wrapper, because I fear that the man who wrote the letter is not so much of an altruist as he pretends to be.

In the first place, who cares whether the little keg of which he speaks so affectionately is cunning or not? I have seen cunning perfume bottles and cunning kegs for herring, but never a cunning beer keg. Perhaps it has to be so in order to "go snugly under a bed," but I wouldn't want it under a bed anyway. This attempt to convert a plain receptacle into an ornament for a room is itself suspicious, but let it pass. Other and more ques-

tionable statements need attention.

Take, for instance, the evasive way in which the writer advertises the power of his potion. Whatever visions he conjures up by the advertisement of a real drink for a real he-man are negated by his saying that the same drink contains every property that a gentleman of discrimination demands in a beverage. The real he-man is after strength, something that will leave a scorching, smoking trail as it goes by, whereas the discriminate gentleman would prefer water to such an inflammatory drink. This fellow is trying to be all things to all men, and if he is offering a compromise beverage, he will not get the patronage of either extreme.

Furthermore, just what does he mean when he says that his product carries an ironclad guarantee of satisfaction or money back? Has he posted forfeit money in a responsible bank, or is he going to answer complaints by saying: "Give it time to work!" Surely he does not mean that purchasers can sue him in the federal courts for violating the pure food and drug act, to say nothing of using the mails to defraud. I have heard of cases in which a purchaser sues a bootlegger because he got cold tea instead of something stronger, but to the best of my recollection they were always laughed out of court. I am afraid that this is merely another get-rich-quick scheme, but I refuse to be left holding the bag—or the keg.

BOOK REVIEWS

(Continued from page 444.)

Neither is it a satisfactory presentation of theory or practice for students who are not already well grounded in the subject.—E. L. S.

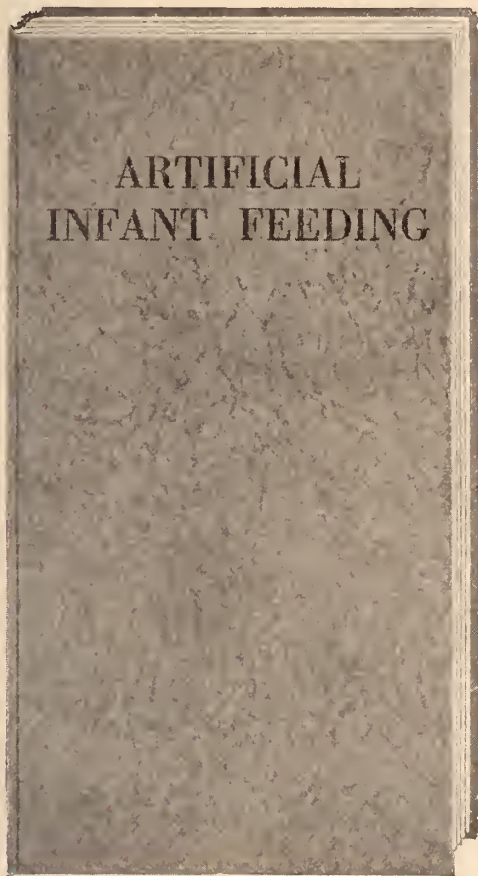
The Surgical Clinics of North America. Volume V, Number 3, June, 1925. Mayo Clinic Number. W. B. Saunders Company, Publishers, Philadelphia and London.

This is a group of articles on various divisions of surgery by members of the Mayo Clinic and Mayo Foundation. The reports cover not only the clinical but also the research problems of surgery.

Of particular interest are the Articles by Buie in Practology; Henderson & Meyerding in Orthopedic and Bone Surgery; Judd, Parker and Morse and Bumpus and Scholl on Urinary Calculi; Mann, on Experimental Peptic Ulcer; Harrington and Plankers, on Empyema, and a group of articles on post-operative treatment.

—C. R. L.

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HOSPITALS IN WISCONSIN; A HISTORICAL SURVEY, 1816-1925

(Continued from Page 51.)

dians in this state at Hayward, Keshena, Neopit, and Tomah.

The federal government has also made provisions of various kinds for medical treatment and hospital care of veterans outside of the federal hospitals. The state government has given generous bonuses to those who served in the war and out of the surplus in the funds raised for this purpose has built a splendid hospital, the State General Hospital, as a memorial to those who served in the war and has established a fund, a Soldiers' Rehabilitation Fund, to provide treatment for those who served in the war.

The State General Hospital is designed as an especially appropriate memorial for those who served in the war. Those who thus served risked life, health and the welfare of their families for their country and state. The Wisconsin General Hospital is planned to promote unselfish service in the warfare against disease, in care of patients, and in the extension of medical knowledge and skill.

II. HOSPITALS, ASYLUMS, AND SCHOOLS FOR THE CARE OF THE INSANE, FEEBLE-MINDED AND EPILEPTIC.

One of the great problems relative to those disabled in the war has been the care of the mentally afflicted. This has also been one of the great civic problems ever since Wisconsin became a state.

The insane form a class of patients for whom proper home care is especially difficult. Improper care aggravates the condition. In the early days of the state the only institutions to which the insane could be committed were the poorhouses and jails. These places were quite unfit for custodial care of this nature. In places the conditions were frightful. "Raving maniacs were found in cells of jails where they had spent months chained to the wall. Women were found in pens with no beds but loose straw, changed only as the accumulation of filth demanded, and with little or no clothing. Others were in cellars and basement cells, chained to staples in the wall, so long that the iron rings had caused sore spots where they came in contact with the body. They were fed like wild beasts, food being handed through a hole in the wall in order to avoid danger. All this was due not so much to cruelty as to fear of the

insane, although most insane are harmless." (Heg, 1898.)

The necessity for humane treatment of the insane was officially recognized as early as 1854 when the state legislature authorized the establishment of a lunatic asylum at Mendota. Owing to various difficulties the building was not ready for occupancy until 1860 and was then called a state *hospital* instead of an *asylum* for the insane. It was hoped that this hospital would cure so many of its inmates as to reduce the general problem of custodial care of the insane. The magnitude of this problem was not realized. The plans for the building called for a type of construction and equipment which at that day had proved elsewhere most efficient in treatment of the insane. The building was planned to have a bed capacity of thirty-two patients. Owing to the great demand for beds this capacity was increased to forty-eight beds for both sexes at the expense of facilities intended to aid in treatment. In 1862 a new wing was completed so as to increase the capacity to 103 beds. By 1870, owing to additional construction and overcrowding, three hundred sixty-two beds were in use. In 1878 the chapel was converted into wards and cross wings were added so that by 1880 there was a bed capacity of nearly five hundred. Meanwhile, the Northern Hospital for the Insane was established at Winnebago in 1873. This was planned to have a bed capacity of 150 but by 1875, 250 beds were in use. The additional capacity was brought about by converting into ward use rooms intended for other purposes of value in treatment. By 1880, through further addition and overcrowding, the capacity of the hospital had been increased to about 500. In 1881 in addition to an average number of about 1,000 patients in the two State hospitals there were 255 in the Milwaukee County Hospital opened the year before, 386 in county poorhouses, 90 in jails, and 73 in various other institutions, a total of 1773. Much more humane custodial care was being given the insane confined in the two state and in the county hospital than had previously been the case in the jails and poorhouses, but these institutions were too overcrowded to be very effective as hospitals for treatment and were, in spite of the names, essentially asylums for cus-

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Fig. 3. A "Patients' Day Room," Clark County Asylum. This Asylum, recently completed, cost nearly \$1,000,000 and has accommodations for 260 patients. The attractive day room shown in the illustration is certainly in marked contrast to the jail cell with straw and chains of the early days in the state.

todial care. Conditions in the jails and poorhouses where many were still confined had in general improved, but in places the frightful facts referred to above could still be found.

In 1881, the legislature passed an act for "the humane care of the chronic insane not otherwise provided for." Counties were authorized by arrangement with the Board of Charities to issue bonds and build asylums for the care of the chronic insane. Toward the support of each patient cared for in such an institute the state agreed to pay the county \$1.50 per week. The number and size of the asylums authorized was to be limited so as not to exceed public needs. Counties establishing asylums were to care not only for their own chronic insane but also for those of counties without such asylums and were to be reimbursed therefor. The counties have responded to the opportunity thus offered in sufficient numbers to provide amply for the chronic insane of the state. Well designed buildings have been erected, good management has been the rule rather than the exception. Excellent care has been furnished the inmates who improve under the conditions of freedom and opportunity for work afforded them. Although the inmates are the chronic insane it has been estimated that two per cent of them recover. Wisconsin may be considered the leading state in effective care of the chronic insane.

Several causes have contributed to the excellent care given the chronic insane in Wisconsin. The State Board of Charities and its successor, the State Board of Control, have exercised wise and careful supervision. By law each county institution is visited at least four times a year and the Board has authority to refuse state support to those institutions not maintaining proper standards. The local trustees of the county asylums have as a rule been wisely chosen. The superintendents of the asylum and the matrons (usually the wives of the superintendents) have been carefully selected and when the service given has been satisfactory have been long maintained in

office. Wisconsin has been very fortunate in having so excellent a group of public servants to take care of her chronic insane. Last but not least, these institutions have not been looked upon as charity institutions. All classes of the community have relatives and friends among the inmates whom they visit and in whose care they are interested. This tends to maintain a demand for high standards of care and the demand is in general well met.

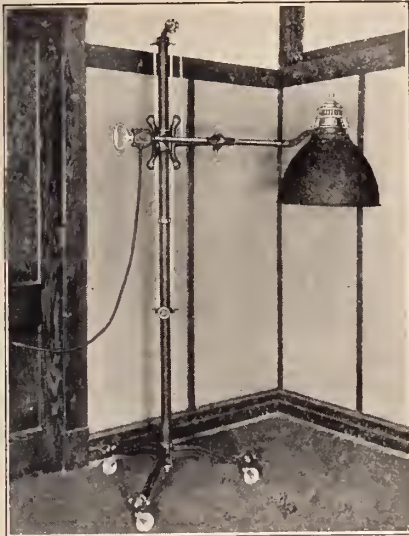
At present 35 counties provide 6,960 beds for the care of the chronic insane. About two-thirds of the buildings were erected between 1881 and 1900, the rest since the latter date. The number of beds in a county asylum outside of Milwaukee County varies from 98 to 260. In addition to the institutions for the insane mentioned above, Douglas County has a sanitarium for the tubercular insane with a capacity of 24 beds.

While the state has found a good solution of the problem of caring for the chronic insane, the still more important problems of the best methods of prevention and cure are yet unsolved although hopeful steps in both directions have been taken. The State Hospital and the Northern Hospital, although planned for the treatment of acute insanity, are not designed along the lines which today would be selected. The buildings are too large and have always been too crowded for the most effective therapy. Nevertheless the removal of the chronic insane to the county asylums has enabled

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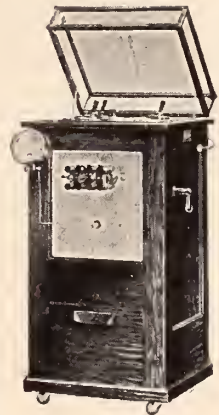
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XXIX

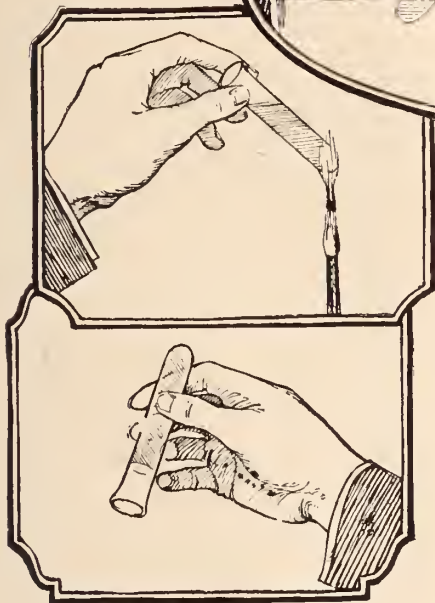
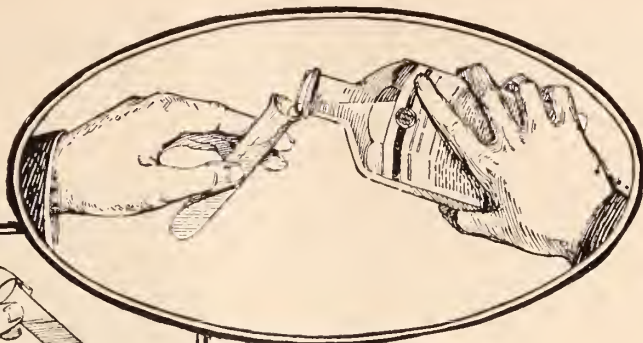
the state hospitals for the insane to accomplish much for their patients. During the past thirty years equipment for treatment has been improved but the number of yearly admissions has increased so rapidly as to offset this advantage. Thus it is estimated that on the average a patient with acute insanity needs two years of treatment. To insure this the number of patients admitted each year should not exceed half the bed capacity of the institution. Since at present each institution is admitting more patients each year than its total bed capacity the average time in the institution is less than one year or less than 50 per cent of the time deemed most advantageous for treatment. Conditions along these lines are growing worse and additional provision for the acute insane is greatly needed.

From the standpoint of therapy one drawback has been that the patients as a rule are those in whom insanity is sufficiently advanced to justify legal commitment. In most cases treatment would be more effective if it could be begun before the disease is thus far advanced. The fact that the number of patients voluntarily entering the two state hospitals has rapidly increased in recent years until now nearly a fifth of the patients admitted are thus classed, pointing to a general recognition of this fact. Greater facilities are needed for the treatment of nervous conditions likely to lead to insanity. In part, this need will be met in the neuro-psychopathic ward of the new State General Hospital described below.

The State Psychopathic Laboratory was established as a part of the service offered at the State Hospital in 1915. Its purposes were: (1) To improve the methods employed in the state for the care of the insane both by developing new methods and by extending the facilities offered those engaged in this the care of the insane to become acquainted with improvements made here and elsewhere. For the latter purpose conferences of state officers at the Institute were proposed. (2) To promote research into the causes, prevention, and treatment of insanity and to extend laboratory facilities to aid physicians in the early diagnosis of conditions likely to lead to insanity or dependency. (3) To promote knowledge of mental hygiene in the state through lectures and other methods. These aims have been carried out in such a way as to amply justify the establishment of the Institute. The most important work of the

laboratory has been, on the one hand, its researches into methods of treatment of certain types of insanity, which have attracted wide attention, and, on the other hand, the aid which the laboratory has extended to physicians in diagnosing diseases in which early diagnosis is of great importance, from many other points of view as well as that of prevention of insanity. The laboratory has been of service along other lines than those mentioned and has been a great stimulus to those engaged in the care and treatment of the insane not only within the state but without. It was established as a separate institution under the supervision of the Board of Control in 1921. The development of the laboratory has been due largely to the far-sighted zeal of its organizers and director and the support afforded by the Board of Control and legislature appropriations. It has been facilitated by the close cooperation which has existed between the laboratory and the medical school at the state university, of the faculty of which the director is a member, and to funds for research furnished by the United States government and by the Public Health Institution of Chicago. The importance of an active center of research into methods of prevention and treatment of insanity can scarcely be overestimated. So long as the insane and feeble-minded are with us they must be given humane care but the burden of their care is as vast and growing one. In September, 1924, there were 1,624 insane in state institutions, 7,551 in county institutions and 1,305 in the homes for the feeble-minded, a total of 10,480. In addition there were a large number of patients out on parole. The net cost to the state in 1922 for caring for the insane was over \$1,500 and for the feeble-minded, about \$300,000. To this large sum must be added indirect losses of various kinds to society. The ratio of the insane to the sane is increasing. In 1890, 4 per 10,000 of the population were admitted to the two state hospitals and to the Milwaukee County Hospital. By 1920 the rate had increased to 7 per 10,000. Unless methods of prevention and cure are discovered and utilized, the proportion of the mentally afflicted relative to the sane will increase until the burden of caring humanely for them finally becomes too great. In this, as in so many other directions, a new duty of government has become apparent, the duty of the promotion of the advance of scientific knowledge and its application to human needs.

(To be continued in our next issue.)



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OH, DOCTOR, DOCTOR!

By H. A. J.

Don't believe all this come-on stuff put out by the railroads about "Seeing America from the windows of our de luxe special trains." The best way to see the country is from the back seat of a flivver. Until I came back from Boston to Wisconsin in one of those useful but not effete little animals, I used to think that New York state was composed of alternate bands of Fletcher's Castoria and Gorton's Codfish (no bones) signs, partially relieved, or at least varied, by a cross-weave of metropolitan outskirts and bad-lands. Massachusetts was a succession of burnt hillsides and water power dams, and Indiana was a wilderness of railroad tracks and smoke-stacks. Now my eyes have been opened—I have savoured the dust of many states, sampled the *esprit de corps* of traffic cops, and ignored the mctious pleasantries of filling station attendants. As regards scenery, the trip was a total loss, but I found this lack more than made up for by the amusing little vanities of the small towns we went through.

How, for instance, could I ever have learned from a casual journey by train that in one little suburb of Buffalo "You are a Stranger Only Once"? And how was I to know without actually stopping there for oil that a town in Indiana was "Ligonier without a Peer"? This last sign was a great help in pronunciation too, for I was just going to give it a French accent. As to the edifying "History of the United States" series of billboards broadcast so liberally by a certain tire company, I must confess they have become fused into a general impression that in the town of so-and-so, which is a scant two and five-tenths miles from here, an Indian scalped a white man, or vice versa.

The most refreshing parts of the trip were the meals. We kept away from big towns with high-priced restaurants, and also from wayside hotels whose prices were designed more for transients than steady customers, yet in all but the smallest towns we were able to exercise some luxury of selection among Square Deal restaurants and the Emporium Food Shop. The most interesting of these was in the town of Victor, New York, and was called with simple modesty "The Victor Restaurant", as indeed it was. An expansive lady, by

name Miss Mabel Trickey, did the cooking, waited on the patrons, and enforced the house rules of the establishment. It seems that one of these rules forbade guests to stand up after they had once sat down, which we infringed because we wished to inspect an attractive map on the opposite wall, and were duly suppressed for getting up to look at it. Miss Trickey was also evidently not averse to a sort of declaration of independence, which was printed on the back of the menu. It was a shy boast of pre-eminence, even a gesture of defiance, and read as follows: "A Personal Message—This restaurant is the result of what the Public has demanded, and is not anything that I have fashioned from my own ideas."

What train, no matter how fast, ever struck a note of such poignant appeal to the traveler? These little intimate touches must always remain for the by-ways and those who care to follow them.

BOOK REVIEWS (Continued)

author has presented the subject in an admirable form for students, but has not produced a text which can be used easily as a reference book by the practitioner—as pointed out by the author in his preface.—C. H. B.

How Is Your Heart? Intimate Talks on the Prevention of Heart Disease and on the Care of an Already Damaged Heart. By S. Calvin Smith, M.S., M.D. Boni and Liveright, New York City.

With the increasing demand for education of the laity, especially as regards preventive medicine, authentic publications on medical subjects presented for the public are timely. It is obvious that the simpler the presentation, the greater the number of people it is possible to reach. But it is necessary, too, to hold the attention of these people until they have learned the lesson taught by the use of a brief and entertaining style.

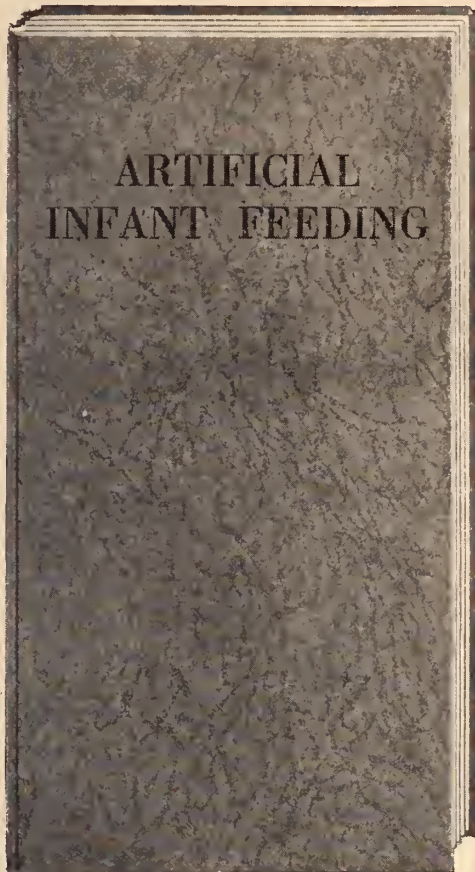
In this book the author has discussed heart problems as they present themselves to patients, in such a way that anyone should have no difficulty in understanding him.

The prevention of cardiac diseases and the care of cardiac patients is especially emphasized, but more stress could properly be made to show the advantages of period health surveys.

This, however, could not be added to what has already been written for the text is already much too long to hold the attention of the average reader to the end. Much that is included might advantageously be omitted to add more emphasis to information of importance.

The style adopted is simple and vigorous with the frequent injection of catchy words and phrases apparently in an effort to hold the attention of the reader.—K. L. P.

New Booklet on Infant Feeding



A Simple, Practical Method Based on the Actual Metabolic Requirements of the Infant

This booklet contains formulas which illustrate how cereals may be employed in safe and proper quantities through the use of Dennos, a cereal milk modifier.

The addition of DENNOS to milk mixtures has three distinct advantages:

1. Dennos is an aid in breaking up the curd into fine, flocculent particles.
2. Dennos is of value in the proper assimilation of salts, especially calcium and magnesium.
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A copy of this booklet and samples of Dennos will be gladly mailed to physicians, on request.

Dennos Products Company

577 East Illinois Street

CHICAGO, ILL.

Hospitals in Wisconsin; A Historical Survey, 1816-1925

BY CHARLES R. BARDEEN, M.D.,

Dean of the University of Wisconsin Medical School

(Continued from June.)

The Wisconsin Home for the Feeble-Minded and Epileptic at Chippewa Falls was opened in 1897. Previous to this time the only public institutions in the state in which the feeble-minded and epileptic could be cared for were the poor-houses and state and county institutions for the insane. The problem of epilepsy from both the medical and social standpoints differs from that of feeble-mindedness and several states provide separate institutions for the treatment of epileptics. In certain types of this disease there is promise that medical treatment will be able to accomplish something and it is probable that Wisconsin will eventually establish a separate institution for the care of such patients.

Feeble-mindedness on the other hand, is, in general, congenital and when mental defect is inherited medical science gives no promise of effecting a cure. In some instances, however, a child appears feeble-minded not because of inherent brain defect but because of some condition of the sense organs, or other structures which may be corrected by medical treatment. Such children should be distinguished as early as possible and given proper care. The State General Hospital now affords facilities for care of this type. The longer this care is delayed the less the chance for recovery.

On the other hand, the most that can be done for a child born with an inherent defect of the brain is to educate him so far as this defect permits. At the last session of the legislature the name of the Home for the Feeble-Minded was changed to Northern Wisconsin Colony and Training School. Owing to the overcrowding at the institution at Chippewa Falls a similar institution, now called the Southern Wisconsin Colony and Training School, was established in 1919 at Union Grove. While both these institutions have to maintain hospital departments for the care of children suffering from diseases common to childhood and require medical superintendence, they are not, as their names imply, hospitals in the usual sense of the word. From the social standpoint feeble-mindedness is to be controlled rather

through prevention than cure. The congenitally feeble-minded should not be permitted to pass on their defects to coming generations. Wisconsin has already taken several advance steps in this direction.

The great majority of Wisconsin's feeble-minded children receiving institutional care are in the two institutions mentioned above. There are, however, in the state two philanthropic institutions which offer care for backward children, feeble-minded, and epileptic, one Catholic and one Lutheran. The number cared for in these two institutions is relatively few compared with those in the state schools.

There are eight private sanitariums in the state designed to care for patients suffering from nervous and mental diseases. The total bed capacity in these sanitariums is about three hundred, a number quite small compared with the 2,400 beds in state and county hospitals for the acute insane. These sanitariums provide excellent treatment for nervous conditions threatening to lead to insanity and for incipient insanity and are in position to accomplish much not possible in our overcrowded state hospitals for the insane. The care given is, however, necessarily of an expensive type which places them beyond the reach of the individual of limited means. Lack of endowment makes it impossible for these institutions to extend care to many patients without capacity to pay for such care.

III. ISOLATION HOSPITALS AND TUBERCULOSIS SANATORIUMS

The insane are cared for in special institutions partly for their own welfare, partly for the protection of others. This is today true also of those confined in special institutions because of suffering from contagious or infectious diseases. This was not always the case. The pesthouse was designed purely for public protection not for private welfare and was even more unsavory than the name implies. In the early days in Wisconsin there were repeated epidemics of severe smallpox which occurred at irregular intervals well into the seventies. The pesthouse was a building without

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Fig. 4. Mt. View Sanatorium for tuberculosis, Marathon County. One of the more recent county sanatoriums.

much in the way of conveniences, which stood empty between epidemics but into which there was an endeavor to force those who came down with the disease when a new epidemic appeared. One was built in Milwaukee as early as 1843. Caretakers were picked up more or less by chance. These pesthouses did little or no good. The disease was finally checked by enforced vaccination. (See Frank's Medical History of Milwaukee.)

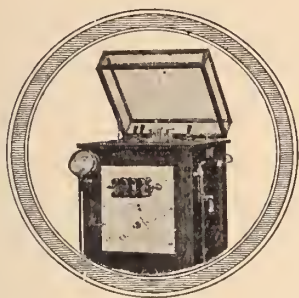
The isolation hospital in Wisconsin, on the other hand, is a comparatively recent institution and there are fewer in the state than there should be. In 1877 Milwaukee purchased a site and erected a small hospital which, under the charter then existing, could be used merely for care of smallpox cases and was so used during the mild epidemics of 1882 and 1894. This building was essentially a pesthouse with a few modern improvements. In 1903 Milwaukee rented a building previously used as a private general hospital and converted this into an isolation hospital for the care of acute contagious diseases other than smallpox, such as scarlet fever and diphtheria. In 1912 the first wing of a modern isolation hospital was erected. At present this hospital, the South View Municipal Hospital, has nearly 200 beds and is the largest in the state. Racine has an isolation hospital of 50 beds established in 1913 and a hospital for communicable diseases of 40 beds established in 1921. Madison has just completed an especially good 50-bed isolation hospital to take the place of an antiquated building previously used for this purpose. The Directory of the

American Medical Association for 1923 credits three other Wisconsin cities with isolation hospitals established since 1900 but much smaller than those mentioned. Some general hospitals have isolation departments and numerous educational and custodial institutions, public and private, make some provision for care of patients with contagious diseases. Of these the most complete is the Student Infirmary at the University of Wisconsin erected and equipped, partly from state appropriations, partly

from private gifts, in 1918. This is now one of the units of the Wisconsin General Hospital.

The modern municipal isolation hospital is designed to relieve the home of the burden of the care of patients requiring quarantine, to protect the public through more complete quarantine than is likely to be established in a home and to offer the patient specialized service and care not possible in a home. The city health officer has general supervision of the hospital but the patient is usually attended by the family physician. Patients who can afford to pay for cost of care are expected to do so but to others care is free. The nursing is in charge of nurses who have special training in this field of work. Since patients are admitted suffering from various types of contagious and infectious diseases the highest type of hospital service is called for to prevent cross infections. Cleanliness here is demanded such as found nowhere else except in the modern operating room. In the new Madison hospital there is a bathroom between each pair of rooms for patients. A service of this kind is more expensive than that furnished in the ordinary general hospital and the overhead expense is increased by the fact that, while the number of patients to be cared for varies greatly at different times, the hospital must be equipped and staffed at all times so as to be ready when needed. The overhead expenditures must be carried by the municipality but the public good accomplished far more than offsets the cost of this service.

(To be continued in our next issue)



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THERAPEUTIC NOTES

NEW AND NONOFFICIAL REMEDIES

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Poison Ivy Extract—Lederle (In Almond Oil).

Poison Ivy Extract—Lederle (In Almond Oil) 1 c.c.

Rabies Vaccine—Lederle (Simple Method).

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Powers-Weightman-Rosengarten Co.—

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WITH THE TRI-STATE TOUR

(Continued from page 102.)

cheapness, is still kept up in a large number of the clinics.

7. The older hospitals of London are all rich in history and tradition. In their halls and corridors may be seen the statues and oil paintings of famous alumni too numerous to list here. St. Thomas Hospital on the Thames embankment opposite the houses of parliament takes great pride in displaying the room where Florence Nightingale after the Crimean War founded and maintained the first training school for nurses. St. Bartholomew boasts of having had open doors to receive patients continuously for the past 802 years.

Manchester, Liverpool, Newcastle and Leeds are all important medical and teaching centers where work of the highest type may be seen. Leeds is of special interest to Americans because the name is associated with the names of two great surgeons, Mayo Robson and his successor Moynihan. The latter is easily the most picturesque character in the surgical world today. Of athletic build and military bearing, his flowing eloquence, Chesterfieldian manners, faultless technic, and genial disposition combine to make this scion of ten generations of Irish gentlemen a surgical teacher not easily forgotten.

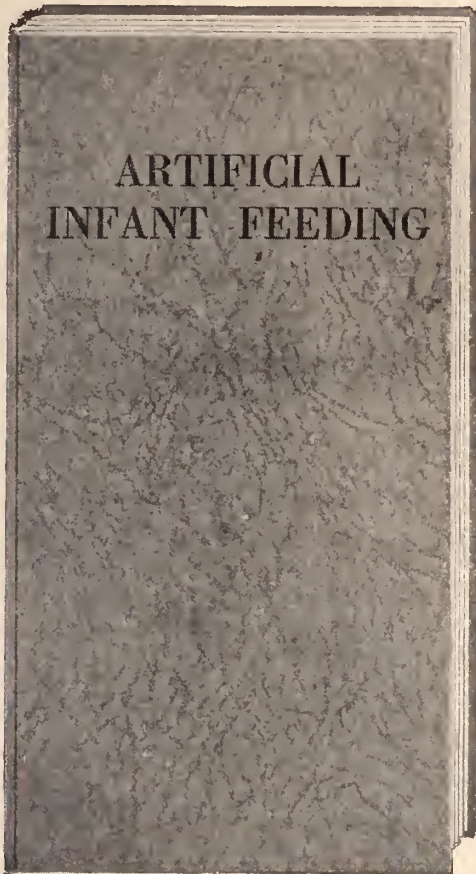
It just occurs to me now that I have not seen a goiter operation since we landed in the British Isles. You can probably guess why thyroid disease is less common here than Wisconsin.

Glancing down at my "knickers" reminds me to add that we have everywhere been made temporary members of golf clubs in the cities visited. 'Nuff said.

Respectfully yours,

Chester M. Echols.

New Booklet on Infant Feeding



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CHICAGO, ILL.

Hospitals in Wisconsin; A Historical Survey, 1816-1925

BY CHARLES R. BARDEEN, M.D.,

Dean of the University of Wisconsin Medical School

(Continued from July)

Institutional care for the pulmonary tubercular brings in problems which differ from those of acute contagious diseases. The importance of quarantine in case of the latter has long been recognized. The general recognition of the infectious nature of the former is comparatively recent. In 1883 the State Medical Society passed a resolution to the effect that, in view of recent knowledge, the members of this society should do all in their power "to have the phthisical members of their families as much as possible separated from the healthy members" and requested the State Board of Health to take steps to keep the tubercular from intimate association with the well in public institutions. The Board of Health replied that while it believed that physicians should do what they could to prevent infection the board was unwilling to take drastic steps owing to uncertain knowledge concerning tuberculosis. Since this time it has come to be generally recognized that there is comparatively little danger of the spread of this infection from one individual to another if proper habits of personal hygiene are learned and observed, that tuberculosis may be spread through food from animals to man, that incipient tuberculosis can frequently be cured by rest, outdoor air, sunshine, and a simple but liberal diet, that as a rule the earlier the treatment is begun the better are the chances of success, that treatment can frequently be better given in an institution than at home, that as a rule a patient can be as successfully treated in Wisconsin as in the far west or south, and that in advanced chronic cases institutional care is best because of the great difficulty of giving proper care and observing proper precautions at home. In the education of the public concerning this disease, in the establishment of laws, regulations and public institutions to deal with it wisely, and in scientific research concerning its nature, Wisconsin has taken a leading part. The State University and the State Board of Control and national and local private organizations have cooperated with the State and local Boards of Health to bring this about. The Wisconsin Anti-Tuberculosis Association, established in 1908, has played an espe-

cially active part. At present one of its chief activities is conducting free public clinics in various parts of the state for the discovery of tuberculosis in its incipency.

In 1903 Governor La Follette appointed a committee to study the question of the erection of a state sanatorium for the care of patients suffering from incipient tuberculosis. On recommendation of this committee the State Sanatorium at Wales was subsequently established in 1907. This now has a capacity of about 200 patients. Those who can afford to do so pay for the cost of this care. For those who can't do so provision is made for joint payment by state and county. In 1915 the state established a camp for convalescent tubercular patients at Tomahawk. This has 20 beds. In 1911 the state legislature passed a bill authorizing counties to erect sanatoria for consumptive and providing state aid for this purpose. Fourteen such county sanatoria have been established with a total capacity of 850 beds. All of these are well built, well equipped, and well managed for the purpose for which they are designed. Muirdale with 350 beds is one of two situated in Milwaukee County. It is the largest in the state and is exceptionally well-designed and equipped. The rapid decline of tuberculosis in the state which has accompanied the steps taken here to control this disease is clear proof of the value of this work.

The cost of the prolonged treatment usually needed in case of tuberculosis together with the idea, now beginning to be abandoned as a general proposition, that patients who could afford to do so should seek a dry or a warm climate has led to a comparatively little development of private institutions for the care of the tuberculous in the state. There is one excellent institution of this kind with 50 beds. There are two other institutions with a total of 50 beds which are under private control but are conducted as benevolent institutions and receive support from private sources. We have spoken above of the large federal institution recently established at National Home.



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IV. HOSPITALS FOR INFANTS AND CHILDREN

The only hospitals in the state specifically designed for the care of infants and children are the Milwaukee Infants' Hospital, now with 45 beds, and the Milwaukee Children's Hospital, now with 125 beds. Both of these are benevolent institutions under private management. The Infants' Hospital was established in 1882 as a home and hospital, but in 1898 gave up its functions as a home and increased its hospital facilities. In 1902 the city donated a lot on which a new building was erected. While there are a number of diseases peculiar to infants a considerable part of the work of such a hospital consists in correcting nutritive disturbances. The Children's Hospital was established in 1894. It has recently completed a new building with first-rate facilities. A considerable part of the work of this hospital is of an orthopedic nature, the correction of deformities through surgery. The support of both these hospitals comes in the main from pay patients. The Milwaukee County Home for Children has 48 hospital beds.

In 1886 there was established at Sparta a state public school for dependent and neglected children. At the time this institution was established it was intended that only healthy children should be sent there, that these children should be placed as rapidly as practical in good families for temporary or permanent adoption and that while at the school the children should receive a moral, intellectual, and physical education suited to their years. It was soon found that dependent and neglected children are very apt to be physically unsound, that such children need good institutional care even more than the well, and that since there was no other institution to which they could be sent, they must be sent to Sparta. Furthermore, physically unsound children could not, as a general rule, be placed in good homes and hence tended to remain longer at Sparta than the physically well and to increase in number in proportion to the well. Under a law subsequently adopted "no child who is feeble-minded, epileptic, or suffering from syphilis or from any other disease that may later on cripple such child or who has had a feeble-minded parent or one whose parents have suffered from any nervous or mental disease that is likely to be repeated in the child, shall be

placed in any home on indenture or for adoption."

The institution at Sparta, before long, became overcrowded and its work as a school and home-finding institution for healthy indigent children became hampered by its responsibilities as a custodial institution for the physically handicapped and infants. For performing the latter function properly it needed special medical equipment and the services of a specialized medical staff such as found in highly developed medical centers. Described as the "most beneficent of state institutions," when it was established, it was before long being described as not only "a home for neglected children, but also a neglected home for children." In 1901 a law was passed providing that there should be received at Sparta "any children under twenty-one years of age, residents of this state who are crippled or deformed in body"; provided they be amenable to cure. The Board of Control was authorized to provide the "physicians, surgeons, nurses, teachers, and other employees necessary to carry out the provision of this section and to provide the necessary appliances, material, equipment and facilities therefor." The Board was not, however, provided with adequate funds for this.

Ten years after the original statute was passed we find the first report regarding the care of the crippled children at Sparta. At that time a "hospital" had been completed for the reception of crippled children under fourteen years of age and this was occupied by nine crippled children. This building should be described as a non-fireproof cottage rather than as a modern orthopedic hospital. But \$7,500 was provided for the care of crippled children for the biennium 1910-12. By June, 1914, the number of crippled children under treatment had increased to 23. For the biennium 1916-18 the total number of children under care or treatment was 53, the average number was 30. The superintendent in charge in 1918 stated that "judged by modern standards we are not doing for these children all that might or should be done." In 1917 a law was passed authorizing the Board of Control to place any of the crippled children in its care in an appropriate hospital in the state wherein adequate surgical treatment might be given them. Juvenile judges were given authority to commit for treatment to the state school or "other appropriate hospital" infants born defective when, in the judgment of the court, the defect is remediable. During the biennium 1919-20 eleven crippled children and four babies with cleft palate were sent to Milwaukee for treatment by specialists.

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THERAPEUTIC NOTES

NEW AND NONOFFICIAL REMEDIES

In addition to the articles enumerated in our letter of June 30th, 1925, the following have been accepted:

- Eli Lilly & Co.
 Diphtheria Toxin-Antitoxin Mixture 0.11 plus.
 Typhoid Mixed Vaccine, Prophylactic and Therapeutic
 Schick Test, 50 test package.
 H. A. Metz Laboratories
 Neosalvarsan Dose XII.
 Parke, Davis & Co.
 Germicidal Dises of Potassio-Mercuric Iodide—P. D. & Co.
 Powers-Weightman-Rosengarten Co.
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TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Scarletinal Antitoxin (Unconcentrated)—Mulford. A scarlet fever streptococcus antitoxin (*Jour. A. M. A.*, May 2, 1925, p. 1338). It is prepared from the serum of horses treated with subcutaneous injections of toxic filtrate from cultures of scarlet fever streptococci and also with intravenous injections of the streptococci themselves. Each c.c. neutralizes at least 10,000 skin test doses of scarlet fever toxin. Marketed in packages of one syringe containing 10 c.c. (prophylactic dose) and in packages of one vial containing 40 c.c. (therapeutic dose). H. K. Mulford Company, Philadelphia.

Scarlet Fever Antitoxin—Lederle (Unconcentrated). A scarlet fever streptococcus antitoxin (*Jour. A. M. A.*, May 2, 1925, p. 1338). It is prepared by immunizing horses by the subcutaneous injection of the toxic filtrate obtained by growing the scarlet fever streptococci in broth; also by injection of cultures of the scarlet fever streptococcus. Each c.c. neutralizes at least 10,000 skin test doses of scarlet fever toxin. Marketed in packages of one syringe containing 10 c.c. and in packages of one cylinder containing 50 c.c. with an intravenous injection outfit. Lederle Antitoxin Laboratories, New York.

Insulin—Stearns 80 Units, 5 Cc.—Each Cc. contains 80 units of insulin—Stearns (New and Nonofficial Remedies, 1925, p. 174). Frederick Stearns & Co., Detroit.

Insulin—Stearns 80 Units, 10 c.c.—Each c.c. contains 80 units of insulin—Stearns (New and Nonofficial Remedies, 1925, p. 174). Frederick Stearns & Co., Detroit.

Tuna Fish Protein Extract Diagnostic—P. D. & Co.—A protein extract diagnostic—P. D. & Co. (New and Nonofficial Remedies, 1925, p. 289). Parke, Davis & Co., Detroit. (*Jour. A. M. A.*, July 4, 1925, p. 35.)

Loefflund's Malt Extract.—A preparation essentially similar to extract of malt U. S. P. It is marketed as Loefflund's malt extract with calcium (containing calcium lactophosphate 0.5 per cent) and Loefflund's malt extract with cod liver oil (Norwegian cod liver oil 33 per cent). Britt. Loeffler & Weil, New York, distributor. (*Jour. A. M. A.*, July 11, 1925, p. 115).

ZINC STEARATE DUSTING POWDERS FOR INFANTS

The second report of the committee on accidents from zinc stearate dusting powders appointed by the Board of Trustees of the American Medical Association has recently been published. Copies of this report, with an appendix showing the opinions of thirty-four representative pediatricians on the therapeutic value of such powders, can be obtained on request. Address, Committee on Zinc Stearate Dusting Powders, American Medical Association, 535 North Dearborn Street, Chicago, Illinois, enclosing a self-addressed, stamped envelope.

There were reported to the committee 131 accidents from the inspiration of zinc stearate dusting powders by infants. Twenty-eight of the victims died. The committee conferred with representatives of certain distributors concerning the dangers incident to the use of such powders on infants. Following a meeting held at the headquarters of the American Medical Association, these distributors agreed to cooperate by adopting self-closing containers for the powders they distribute and agreed that cautionary labels are desirable. Opinions were secured from thirty-four representative pediatricians concerning the therapeutic value of zinc stearate dusting powders. Thirty-one believe that such powders have no advantage over other dusting powders, that they constitute a hazard to infant life, and that their use should be discouraged.

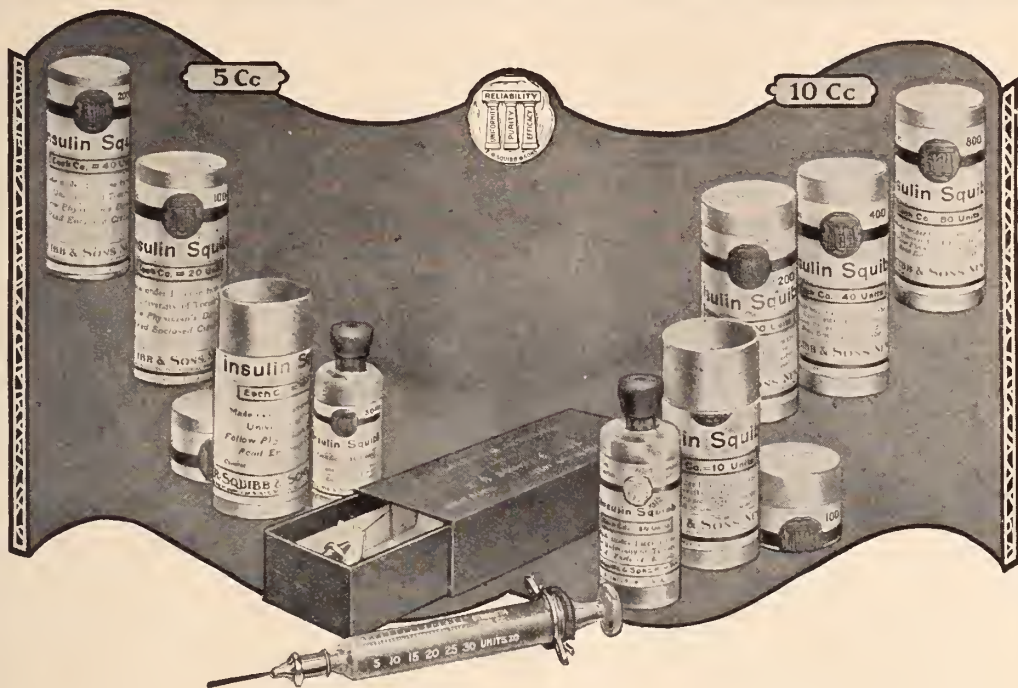
NEW PLANT FOR ABBOTT

The new plant of the Abbott Laboratories, pictured below, and now nearly ready, will be, when occupied, the finest complete pharmaceutical and research plant in the world. Here the newest synthetic, medicinal chemicals are made in large quantities by improved processes, insuring purity and accuracy. Here also are extracted from the crude drugs the medicinal principles used largely throughout the pharmaceutical industry as well as by the medical profession.



Larger quarters will be provided for the extensive research work now being carried on by a large staff of chemists and new buildings are being provided for the manufacture of the well-known Abbott pharmaceutical specialties.

The administrative office of The Abbott Laboratories, located for many years in Ravenswood, will be moved about October 1st of this year to the new plant. The postoffice address will be Waukegan, Ill., 25 miles north of Chicago on the C. & N. W. R. R. About 24 acres of ground are owned by the Abbott Company to provide for future expansion of their business.



Insulin Squibb

is now available in 5-Cc. and 10-Cc. vials, in four strengths

5-Cc.	10-Cc.	
50	100 units (10 units per Cc.)	— Blue label
100	200 units (20 units per Cc.)	— Yellow label
200	400 units (40 units per Cc.)	— Red label
	800 units (80 units per Cc.)	— Green label

INSULIN is the active anti-diabetic principle of the pancreas. Insulin is the one and only anti-diabetic specific.

All Insulin manufactured in the United States is prepared under the license and control of the University of Toronto.

INSULIN SQUIBB is the name

given to the Insulin manufactured by E. R. SQUIBB & SONS.

INSULIN SQUIBB, in common with other brands of Insulin sold under whatever name in the United States, must conform to standards and requirements established by the Insulin Committee of the University of Toronto.

UNLESS OTHERWISE SPECIFIED, THE 5-Cc. VIAL WILL ALWAYS BE SUPPLIED.

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MANUFACTURING CHEMISTS TO THE MEDICAL PROFESSION SINCE 1858

to the bed of the consumptive, or other invalided one. Let her draw the air through the hose through the lips and take long gentle deep breaths and exhale through the nostrils. Fifteen or twenty of these breaths every fifteen minutes should bring death and destruction to all disease germs of *whatsoever* kind or name within 72 hours. Christ was dead just 72 hours.

I am likewise proposing that the exhalings from the lungs of goats or guinea pigs will also destroy all disease germs. Confine the goat's head in an almost, but not QUITE airtight bag and draw this air into the lungs through the mouth as mentioned before.

Confine fifty guinea pigs in an almost airtight space giving each pig 1600 or 1800 cubic inches of space.

When using the bees, put a ticker on the hive so the invalid can stir them up to the point of anger and battle just as she begins the breathing of their prepared air. This causes every bee to run out his stinger and start on a hunt for the disturber. This loads the air with a rare material that is the healing agency.

Many big physicians have attempted to get up an antiseptic to be taken into the lungs to kill germs, but the remedy was always worse than the disease, for it destroyed the lungs themselves. Not so with this prepared air. The patient realizes that she is drinking in the God-given sweetness and healing influences of the flowery fields and meadows, the ever-present restoring power from blossom and nectar, the soothing and healing essence of the sun's rays, the heavenly manna of the evaporating dew, the X-rays and violet rays and the oxygen concentrator all combine to bring health and restore the invalid.

Bees can be bought for five dollars the hive, guinea pigs at fifty cents and goats for five dollars. I have none for sale and don't know *where* you can get them. Nobody needs to give me anything for anything I am proposing. It is *yours* for the using.

For babies and very sick grown-ups we can convey the air and pour it on their faces by apparatus.

I want to find some one who will find a licensed physician who believes in the power of prayer for healing diseases and let the three of us put in a sanitarium with the Bee Cure and the prayer of faith as the only restorative agencies. For many years I have been praying diseases off and out of folks, but sometimes we fail. I besought God about these failures and the first thing I knew, this Bee Cure was obsessing me day and night and there is no relief from it. Day and night I am obsessed with it. It came to me *not* as an idea, neither as a thought. It *simply came*.

We can get some happy sunny retreat and try it out under the direction of a good physician. We can start on a small scale. Some sanitarium already in operation, or some physician can add it to his practice.

Some teacher can see the point and find the physician. Some Osteopath or Chiropractor or Nature doctor or Electric physician can try the Bee Cure so long as he stays within the law of his state.

If some Idaho physician wants to test it out, I will raise the money for it. Write me on the subject.

Sincerely,

B. W. RICE,

Caldwell, Idaho.

TREATING THE SICK

(Continued from Page 225.)

within one year without further examination fee. If he fails in two or more subjects he shall not be again examined until after the lapse of one year, and then only upon application anew and in all subjects. If the applicant states that his practice is to be confined to one organ or set of organs, his examination and certificate shall be limited accordingly.

147.08 Reciprocity. The board may issue certificate to an applicant who presents sufficient and satisfactory evidence of having passed examinations in the basic sciences before a legal examining board or officer of another state, or of a foreign country, if the standards are as high as those of this state, and upon payment of a fee of fifteen dollars.

147.09 Previous Practice. Any person who, on February 1, 1925, was regularly licensed or registered in the state of Wisconsin to treat the sick need not be registered under the basic science law. Any person who, on February 1, 1925, was not registered or licensed in the state of Wisconsin to treat the sick but nevertheless on that date was lawfully engaged in this state in treating the sick shall be registered upon presenting to the board, within sixty days after this section goes into effect, an application therefor, with sufficient and satisfactory

evidence that he was, on such date, lawfully engaged in this state in treating the sick, and is of good moral character, and upon the payment of a registration fee of five dollars. The certificate shall recite registration solely as a person who, on February 1, 1925, was lawfully engaged in this state in treating the sick. Such certificate shall be in force only when filed with the county clerk in the manner provided in section 147.14.

147.10 Revocation. Certificate of registration in the basic sciences shall be subject to revocation for the causes and in the manner provided in section 147.20.

147.11 Review. The candidate affected, or any state examining board for any branch of treating the sick, may commence an action in the circuit court for Dane county against the board to set aside action by it granting or denying a certificate of registration under the basic science law. In such action the complaint shall be served with the summons, and within twenty days after such service, the board shall answer, and shall cause to be filed with the clerk of the court the papers and records upon which it acted, or certified copies thereof. The issues shall be tried by the court upon such papers and records, and additional evidence in the discretion of the court. The court may (1) dismiss the action, or (2) remand the record to the board for (a) further examination or investigation, or (b) modifica-

(Continued on Page XXIV.)

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Many doctors and other professional men are besieged by solicitors for get rich quick schemes and blue sky securities. Why?

Because doctors are usually busy men, and haven't time to investigate thoroughly before making their investments. The silver tongued promoter considers them "easy picking."

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Pick a house you know—one with a reputation to uphold, ask their advice and let their representatives help you. It is their desire to satisfy you with those investments best suited to your needs and circumstances.

The fake securities salesman never expects to sell to you the second time. He won't.

Our salesmen do expect to sell you more good securities, and they expect to give satisfaction.



Second Ward Securities Co.
Milwaukee

tion or reversal of its action. The attorney-general shall appear in such action for the board, and no costs shall be taxed by either party.

147.12 Administration. The board shall keep a complete record in which shall be entered all applications, examinations, registrations, fees, decisions, orders and proceedings. It shall from time to time from lists furnished by the state civil service commission, appoint such competent and recognized experts as shall be necessary to assist in the examinations, and necessary clerks. They shall receive such compensation as the board shall fix. On or before August first of each year, the board shall file with the governor a report of all receipts, disbursements and transactions for the preceding fiscal year. The disbursements of the board shall not exceed the fees received.

147.13 Examiners. (1) The governor shall appoint the "Wisconsin State Board of Medical Examiners", consisting of eight members. The appointment of each member shall be for four years. No instructor, stockholder, member of, or person financially interested in any school, college or university having a medical department, or of any school of osteopathy, shall be eligible. Three members shall be allopathic, two homeopathic, two eclectic and one osteopathic, and all shall be licentiates of the board.

(2) The board shall meet regularly on the second Tuesday of January at Madison and on the last Tuesday of June at Milwaukee, and at such other times and places as it wills. It shall elect annually at its June meeting a president and a secretary-treasurer. The president or secretary may administer oaths. The secretary-treasurer shall furnish such bond as the board shall require, and shall receive all moneys and pay the same into the state treasury.

(3) The board shall fix the compensation of the members, at not more than ten dollars for each day actually spent and actual and necessary expenses, and of its secretary at not more than one thousand dollars a year and such expenses.

(4) The board shall employ a licensed attorney as counsel and other necessary assistants, and fix their compensation. The counsel shall attend the meetings of the board, advise the members, and assist the board generally.

(5) The board shall have a common seal, and keep a record of its proceedings and a register of applications, and licenses and certificates of registration issued. It shall make annual report of its proceedings to the governor on June thirtieth, including detailed statement of money received and expense of operation.

(6) The board shall investigate complaints of violation of this chapter, notify prosecuting officers, institute prosecutions, and if it so direct, and the court and district attorney consent, its counsel shall assist the district attorney.

147.14 Practice. (1) No person shall practice or attempt, or hold himself out as authorized to practice medicine, surgery or osteopathy, or any other system of

treating bodily or mental ailments or injuries of human beings, without a license or certificate of registration from the state board of medical examiners, except as otherwise specifically provided by statute, nor unless he shall record the same with the county clerk of the county in which he shall practice and pay a fee of fifty cents for each recording. The clerk shall enter in a book kept for that purpose the date of the license or certificate, the name of the licensee, school or practice shown, and the date recording.

(2) No person violating subsection (1) of this section shall have the right to collect by law any compensation for professional services, or to testify in a professional capacity as a medical or osteopathic physician or practitioner of any other form or system of treating the afflicted, or as an insanity expert; except that a court in a criminal action may receive the testimony of any person as an expert and that practitioners in medicine, surgery or osteopathy licensed in other states may testify as experts in this state when such testimony is necessary to establish the rights of citizens or residents of this state in a judicial proceeding and expert testimony of licensed practitioners of this state sufficient for the purpose is not available.

(3) No person not possessing a license to practice medicine and surgery, osteopathy or osteopathy and surgery, under section 147.17 shall use or assume the title "doctor" or append to his name the words or letters "doctor," "Dr.," "specialist," "M. D.," "D. O.," or any other title, letters or designation which represents or may tend to represent him as a doctor in any branch of treating the sick.

147.15 Application. Application for license or certificate of registration may be made at the time and place designated by the board or at a regular meeting. The applicant shall present satisfactory evidence of good moral and professional character, and of having completed a preliminary education equivalent to graduation from an accredited high school of this state, and for license to practice medicine and surgery, also a two years' college course in physics, chemistry, biology and either German or French, the equivalent of a two years' premedical course at the University of Wisconsin. Applicants for license to practice medicine and surgery, or osteopathy and surgery, shall present also a diploma from a reputable professional college, or, if the college requires for graduation a hospital internship in addition to a four years' course, a certificate of completion of such course. Applicants for certificate of registration to practice massage of hydrotherapy shall present satisfactory evidence of the completion in a scientific or professional school of an adequate course in physiology, descriptive anatomy, pathology, and hygiene instead of a two years' college course. Each applicant shall file a verified statement that he is familiar with the state health laws and the rules and regulations of the state board of health relating to communicable diseases. The application shall be accompanied by a fee, to be fixed by the board at not more than twenty dollars and five dollars additional for license or certificate if issued.

(Continued on Page XXVI.)

Announcing the Fourth Annual

Physiotherapeutic Convention

Arrangements have been perfected for a really elaborate Physiotherapeutic Convention to be held at the

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October
12-16

1925

There will be lectures, clinics and demonstrations, all in charge of well-known physicians and surgeons. For purposes of demonstration, carefully prepared papier-mache or wax figures and live models will be employed for this purpose.

List of Speakers

- MILES J. BREUER, M.D.
Lincoln, Neb.
W. B. CHAPMAN, M.D.
Carthage, Mo.
M. H. COTILE, M.D.
Chicago, Ill.
ELKIN P. CUMBERBATCH, M.D.
London, England
LEO C. DONNELLY, M.D.
Detroit, Mich.
EMILE C. DUVAL, M.D.
Chicago, Ill.
RAYMOND F. ELMER, M.D.
Chicago, Ill.
J. C. ELSOM, M.D.
Madison, Wis.
F. H. EWERHARDT, M.D.
St. Louis, Mo.
GEORGE W. FUNCK, M.D.
Chicago, Ill.
J. U. GIESY, M.D.
Salt Lake City, Utah
E. C. HENRY, M.D.
Omaha, Neb.
A. R. HOLLENDER, M.D.
Chicago, Ill.
WM. E. HOWELL, M.D.
Chicago, Ill.
ARTHUR E. JOSLYN, M.D.
Lynn, Mass.
D. FRANK KNOTTS, M.D.
Chicago, Ill.

The Convention will be subdivided into the following sections:

- | | |
|--------------------------------------|-----------------------------------|
| Eye, Ear, Nose and Throat. | Neurology. |
| Gynecology and Urology. | Internal Medicine and Pediatrics. |
| Orthopedics and Surgery. | Industrial Physiotherapy. |
| Dermatology, including Malignancies. | Miscellaneous Practice. |

Special rooms will be provided on the mezzanine floor for smaller groups attending clinics and round table discussions, and for demonstrations to follow up interesting talks delivered from the platform. There will also be clinics at Chicago hospitals.

Admission will be by card only. A. M. A. rules will apply throughout; either an A. M. A. fellowship card or its equivalent will ensure admission. Arrangements for accommodations, etc., will be attended to on request by the Educational Department of H. G. Fischer & Co., Inc.

A record attendance is anticipated. There were over seven hundred physicians and surgeons present at last year's Convention, and this year's record will be much higher. Those interested are advised to make plans now and

List of Speakers

- DISRAELI W. KOBAK, M.D.
Chicago, Ill.
GUSTAV KOLISCHER, M.D.
Chicago, Ill.
WILLIAM A. LURIE, M.D.
New Orleans, La.
G. BETTON MASSEY, M.D.
Philadelphia, Pa.
FREDERICK H. MORSE, M.D.
Boston, Mass.
ROSWELL T. PETTIT, M.D.
Ottawa, Ill.
T. HOWARD PLANK, M.D.
Chicago, Ill.
CURRAN POPE, M.D.
Louisville, Ky.
ISRAEL L. SHERRY, M.D.
Chicago, Ill.
CHAS. E. STEWART, M.D.
Battle Creek, Mich.
HARRY M. THOMETZ, M.D.
Chicago, Ill.
ALBERT F. TYLER, M.D.
Omaha, Neb.
FRANK H. WALKER, M.D.
Shreveport, La.
CLARENCE M. WESTERMAN, M.D.
St. Louis, Mo.
A. L. YOCOM, JR., M.D.
Chariton, Iowa

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147.16 **Examination.** Having complied with section 147.15, the applicant shall be examined in anatomy, physiology, general diagnosis, pathology, histology, chemistry, hygiene and sanitation. All applicants shall be given the same examination in the foregoing subjects, so far as practicable, except that applicants for a certificate to practice massage or hydrotherapy need be examined only in physiology, descriptive anatomy, pathology and hygiene, and shall be further examined in massage or hydrotherapy, under the supervision of the board, by three registered practitioners in massage or hydrotherapy selected by the board, and receiving the same compensation as board members. Applicants for license to practice medicine and surgery, or osteopathy and surgery, shall be further examined in the branches usually taught in reputable professional colleges. A college maintaining the standard of preliminary education designated in section 147.15, and requiring at least four courses of eight months each shall be deemed reputable under this chapter.

147.17 **License.** If six members, or in case of an applicant for massage or hydrotherapy, a majority of the board, find the applicant qualified, it shall issue a license to practice medicine and surgery, or osteopathy and surgery, or certificate of registration to practice massage or hydrotherapy, or other system of treating, signed by the president and secretary and attested by the seal. A copy of the applicant's statement of familiarity with health laws and rules shall then be forwarded to the state board of health. Certificate of registration to practice massage or hydrotherapy shall authorize practice in these or educational gymnastics, but not the treatment of a specific disease except upon the advice of a licensed medical physician. The board may license without examination a person holding a license to practice medicine and surgery, or osteopathy and surgery, in another state, if in such state the requirements imposed are equivalent to those of this state, upon presentation of the license and a diploma from a reputable professional college, or an honorably discharged surgeon or the army or navy, or of the federal public health service, upon filing of a sworn and authenticated copy of his discharge. Fee for license without examination shall be fixed by the board, at not more than fifty dollars. A person licensed before 1916 to practice osteopathy, shall be licensed to practice surgery upon presenting satisfactory evidence of having completed a course in surgery at a reputable osteopathic college, requiring not less than twenty months' actual attendance, and the regular examination of the board in surgery, and being found qualified by six members. The board may deny the application of one not twenty-one years of age. No certificate of registration shall be considered equivalent to a license.

147.18 **Itinerants.** Itinerant practitioners of medicine, surgery or osteopathy or of any form or system of treating the afflicted shall obtain an annual license in addition to the regular license or certificate of registration, and shall pay therefor two hundred fifty dollars per annum. Persons practicing medicine, surgery or osteopathy or professing or attempting to treat or heal

ailments or injuries of the human body who go from place to place at regular or irregular intervals less frequently than once a week, are itinerant practitioners.

147.19 **Exceptions.** (1) Sections 147.14 to 147.18, shall not apply to commissioned surgeons of the army, navy, federal health service, or to medical or osteopathic physicians of other states or countries in actual consultation with resident licensed practitioners of this state, nor to the gratuitous prescribing and administering of family remedies or treatment rendered in an emergency.

(2) None of the provisions of this chapter or the laws of the state regulating the practice of medicine or healing shall be construed to interfere with the practice of Christian Science, or with any person who administers to or treats the sick or suffering by mental or spiritual means, nor shall any person who selects such treatment for the cure of disease be compelled to submit to any form of medical treatment.

147.20 **Revocation.** (1) The words "immoral or unprofessional conduct" as used in this section mean: (a) Procuring, aiding or abetting a criminal abortion; (b) advertising in any manner either in his own name or under the name of another person or concern, actual or pretended, in any newspaper, pamphlet, circular, or other written or printed paper or document the curing of venereal diseases, the restoration of "lost manhood," the treatment and curing of private diseases peculiar to men or women, or the advertising or holding himself out to the public in any manner as a specialist in diseases of the sexual organs, or diseases caused by sexual weakness, self-abuse or excessive indulgences, or in any diseases of a like nature or produced by a like cause, or the advertising of any medicine or any means whatever whereby the monthly periods of women can be regulated or the menses re-established, if suppressed, or being employed by or in the service of any person, or concern, actual or pretended, so advertising; (c) the obtaining of any fee, or offering to accept a fee on the assurance or promise that a manifestly incurable disease can be or will be permanently cured; (d) willfully betraying a professional secret; (e) indulging in the drug habit; (f) conviction of an offense involving moral turpitude.

(2) Upon verified complaint in writing to the district attorney charging the holder of a license or certificate of registration from the state board of medical examiners with having been guilty of immoral or unprofessional conduct or with having procured his certificate or license by fraud or perjury, or through error, the district attorney shall bring civil action in the circuit court against the holder and in the name of the state as plaintiff to revoke the license or certificate. The court may appoint counsel to assist the district attorney and either party may demand a jury. No one shall be privileged from testifying fully or producing evidence, but he shall not be prosecuted or subject to penalty on account of anything about which he so does, except for perjury in so doing. If the court or the jury finds for the plaintiff, judgment shall be rendered revoking the license or certificate. The costs shall be paid by the county, but if the court shall determine that the com-

(Continued on Page XXVIII.)

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plaint made to the district attorney was willful and malicious and without probable cause, it shall enter judgment against the person making the complaint for the costs of the action, and payment of the same may be enforced by execution against the body as in tort actions.

(3) If any person licensed or registered by the board of medical examiners shall be convicted of a crime committed in the course of his professional conduct, the court in which such conviction is had shall in addition to other punishment revoke the license or certificate.

(4) When a license or certificate is revoked, the clerk of the court shall file a certified copy of the judgment with the board of medical examiners, and no license or certificate shall be granted thereafter to such person.

147.21 **Penalty.** Anyone violating any provision of this chapter shall be fined not less than one hundred nor more than five hundred dollars, or imprisoned not less than sixty days nor more than one year, or both.

147.22 **Malpractice.** Anyone practicing medicine, surgery, osteopathy, or any other form or system of treating the afflicted without having a license or a certificate of registration authorizing him so to do, shall be liable to the penalties and liabilities for malpractice; and ignorance on his part shall not lessen such liability for failing to perform or for negligently or unskillfully performing or attempting to perform any duty assumed, and which is ordinarily performed by authorized practitioners.

147.23 **Chiropractic.** (1) No person shall practice chiropractic, or in any manner attempt or hold himself out to do so, unless he have a certificate of registration in the basic sciences and a license to practice chiropractic from the state board of examiners in chiropractic, and shall have recorded such certificate and license with the county clerk of any county in which he shall so practice or attempt to hold out to practice, and pay a fee of fifty cents for each recording.

(2) **Board.** The governor, with the advice and consent of the senate, shall appoint the state board of examiners in chiropractic to consist of three chiropractors, each of whom shall have been a continuous resident of and practitioner of chiropractic in the state for the preceding three years, who is not an officer or employer, nor financially interested in any school or college of chiropractic, and who shall not be a graduate of any school teaching a method of treating the sick other than chiropractic. The term of office shall be six years, and a vacancy shall be filled for the unexpired term. The first appointments shall be made within thirty days after the taking effect of this section and shall be for terms expiring April 1, 1927, April 1, 1929, and April 1, 1931, respectively. The board shall within thirty days after appointment organize by the election of a chairman and secretary. The compensation of the members of the board shall be ten dollars for each day actually spent and actual and necessary expenses incurred in the performance of their official duties.

(3) **Application.** Application for a license to practice chiropractic shall be made to the board of examiners in chiropractic, accompanied by sufficient and satisfactory evidence of good moral character, preliminary education equivalent to graduation from an accredited high school of this state, graduation from a reputable school of chiropractic having a residence course of not less than three years, consisting of not less than four thousand thirty minute class hours, certificate of registration in the basic sciences, and a fee of twenty-five dollars.

(4) **Examination.** Examination shall be in the subjects usually taught in such reputable schools of chiropractic, and shall be conducted at least twice a year at such times and places as the board shall determine.

(5) **Previous Practice.** The board shall grant without examination a license to practice chiropractic in this state to any person who was on February 1, 1925, a reputable practitioner of chiropractic in this state, and who shall present to the board of examiners in chiropractic, prior to September 1, 1925, sufficient and satisfactory evidence of the same.

(6) **Revocation.** Licenses to practice chiropractic shall be subject to revocation for the causes and in the manner provided in section 147.20.

(7) **Annual Renewal.** All licenses issued by the board shall expire on the thirty-first day of December following the issue thereof, except that any holder of a license may have the same renewed from year to year by the payment of an annual renewal fee of five dollars.

(8) **Administration.** The board shall keep a complete record of all applications, examinations, licenses, fees and proceedings. On or before August first of each year, the board shall file with the governor a report of all receipts, disbursements and transactions of the preceding fiscal year.

APPROPRIATIONS.

State Board of Examiners in the Basic Sciences.

20.435. All monies collected or received by each and every person in behalf of the state board of examiners in the basic sciences under sections 147.01 to 147.02, inclusive, shall be paid within one week after receipt into the general fund, and are appropriated therefrom for the administration of said sections.

State Board of Examiners in Chiropractic.

20.437. All monies collected or received by each and every person in behalf of the state board of examiners in chiropractic under section 147.23 shall be paid within one week after receipt into the general fund, and are appropriated therefrom for the administration of said section.

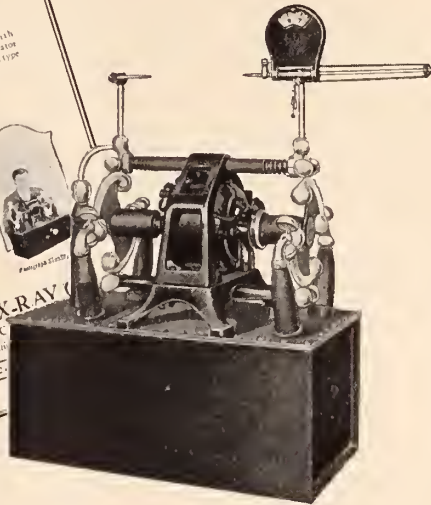
State Board of Medical Examiners.

20.44. Board of Medical Examiners. There is appropriated from the general fund to the state board of medical examiners, as follows:

(1) General. All monies collected or received by

(Continued on Page XXX.)

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Ever since the Six-Sixty was first announced, some months ago, it has assumed an unquestioned position as the most popular of the Precision Type Generators. The literal flood of orders which have been received from all parts of the world, especially since the installation of the first fifty machines, is, we believe, without precedent in the history of the X-Ray industry.

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each and every person in behalf of said board shall be paid within one week after receipt into the general fund, and are appropriated therefrom for the execution of the general functions of the board. Of this there is allotted:

(a) To each member of the board such compensation as shall be determined by the board, not exceeding five dollars for each day actually spent in attending to the business of the board.

(b) To the secretary of the board a salary, to be fixed by the board, but not to exceed one thousand dollars per annum.

MISCELLANEOUS NOTES

Interpretation. 370.01 (41) The words "physician", "surgeon", or "osteopath" mean a person holding a license or certificate of registration from the state board of medical examiners.

Special chapters of the statutes are devoted to the registration or licensure of optometrists, dentists, dental hygienists and nurses.

OFFICERS.

Secretary, Basic Science Board—Prof. M. F. Guyer, Department of Zoology, University of Wisconsin, Madison, Wisconsin.

Secretary, Medical Examiners—Dr. Robert E. Flynn, State Bank Building, La Crosse, Wisconsin.

Chiropractic Examiners—Edward Zwicker, Baraboo; F. G. Lundy, Marshfield, and A. D. Franz, Plymouth.

Secretary, State Board of Health—Dr. C. A. Harper, State Capitol, Madison, Wisconsin.

Secretary, State Medical Society of Wisconsin—Mr. J. G. Crownhart, 558 Jefferson Street, Milwaukee, Wisconsin.

WHEN THE BOARDS MEET

Basic Science Board—Four times a year at dates set by the board.

Medical Board—Second Tuesday in January at Madison and last Tuesday in June at Milwaukee. Other meetings at the call of the president.

Chiropractic Board—Twice a year at dates set by the board.

SUMMARY.

A certificate of registration in the basic sciences is a prerequisite for licensure or registration for all desiring to "treat the sick" in Wisconsin except the following:

1. Nurses.
2. Dentists or dental hygienists.
3. Optometrists.
4. See also exceptions under section 147.19, subsections (1), (2).

The following are licensed by the State Board of Medical Examiners:

1. Applicants to practice medicine and surgery.
2. Applicants to practice osteopathy.
3. Applicants to practice osteopathy and surgery.

The following are registered by the State Board of Medical Examiners:

1. Chiropodists.
2. Masseurs.
3. Midwives.

The following are licensed by the State Board of Chiropractic Examiners:

1. Chiropractors.

Note: Before an applicant may take an examination to be licensed or registered under the State Board of Medical Examiners or the State Board of Chiropractic Examiners he must have in his possession and submit to such board as a credential, his certificate of registration in basic sciences. The state board of examiners in the basic sciences meets at least four times a year so that no candidate will be delayed in licensure by reason of this requirement.

IN NEXT ISSUE
The special chapters on midwifery and chiropody will be published next month.

PHYSIOTHERAPEUTIC CONVENTION

Physicians are invited to attend the Fourth Annual Physiotherapeutic Convention to be held at the Drake Hotel, Chicago, October 12 to 16, 1925. Papers will be read and discussed by leading physicians of national and international reputation in this field. For particulars see page program in this issue. Demonstrations and exhibits of the latest apparatus and methods employed in physiotherapy will be given. Physicians who are in good standing in their State Medical Association and who can give evidence of the fact are invited. Reservations may be made and programs obtained by addressing the Educational Department of H. G. Fischer & Company, 2335 Wabansia Ave., Chicago, Illinois.

AMERICAN BOARD OF OTOLARYNGOLOGY

The next examination given by the American Board of Otolaryngology will be held at the Cook County Hospital, Chicago, on October 19th, 1925. Application should be made to the Secretary, Dr. H. W. Loeb, 1402 South Grand Boulevard, St. Louis, Missouri.

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Journal Publishes Codification of Wisconsin Statutes Covering Field of "Treating the Sick"

Because of the fact that the revision of the Wisconsin Statutes will not be published for several months, and because no opportunity exists even then to obtain a complete statement of Wisconsin laws on the subject of "treating the sick" except by purchase of a complete set of the statutes, The Wisconsin Medical Journal is herewith publishing such a codification. This material has been proof-read six times in the effort to avoid a single error. Obviously, however, this Journal and its publishers, the State Medical Society of Wisconsin, cannot guarantee the reader that no error exists. There can be no official copy of statutes except as provided by law, either through the Secretary of State or the Revisor of Statutes.—Editor's Note.

PART TWO

CHAPTER 150

MIDWIFERY

- 150.01 Practice.
- 150.02 Application.
- 150.03 Examination.
- 150.04 Certificate.
- 150.05 Revocation.
- 150.06 Penalty.

150.01 **Practice.** (1) No one shall practice or attempt to practice midwifery without a recorded certificate of registration from the state board of medical examiners.

(2) This shall not affect physicians, surgeons or osteopaths, nor prohibit service where a physician, surgeon or registered midwife cannot be secured in time nor gratuitous service in emergency.

(3) The board of medical examiners may make the necessary rules and regulations governing examination and registration hereunder.

150.02 **Application.** Application may be made at time and place designated by the board, or at any regular meeting. The applicant shall present a diploma from a reputable school of midwifery, submit satisfactory evidence of good moral and professional character, and pay ten dollars, and five dollars additional for a certificate if issued. A reputable school of midwifery is one connected with a reputable hospital or sanatorium, giving a course of at least twelve months in the science and practice of midwifery and practical experience in at least twenty cases.

150.03 **Examination.** The applicant shall then take a written examination in anatomy of the female pelvis, anatomy and physiology of the organs contained in the female pelvis, symptoms, diagnosis, physiology and complications of pregnancy, diagnosis, course and manage-

ment of labor and care of mother and child for the first ten days, prepared and conducted by three members of the board appointed by the president.

150.04 **Certificate.** (1) If six members of the board find the applicant qualified, it shall grant a certificate of registration, signed by the president, and secretary and attested by the seal.

(2) The recipient shall forthwith record the certificate with the register of deeds of the county in which she resides or practices, except that in cities of the first class she shall record the certificate with the registrar of vital statistics and pay fifty cents for recording and the recording officer shall enter a memorandum giving date of certificate, name and residence of midwife and the date of recording, in a book kept for that purpose.

(3) The certificate does not authorize the use of any instrument, except to sever the umbilical cord, assisting childbirth by artificial, forcible or mechanical means, performance of version, removal of adherent placenta, nor administering, prescribing, advising or employing drug, herb or medicine other than disinfectant and ergot after redelivery of the placenta, nor authorize a midwife to practice medicine, surgery or osteopathy, or assume any title or designation tending to show that she is a practitioner of medicine or by law so recognized or authorized to grant any medical or death certificate.

150.05 **Revocation.** (1) Subsections (2), (3), and (4) of section 147.08 apply to certificates of registration under this chapter.

(2) The words "immoral or unprofessional conduct" in this section mean: (a) Procuring, aiding or abetting a criminal abortion; (b) advertising in her own or any other name in a written or printed paper or document in an obscene manner derogatory to good morals, or advertising means whereby the menses can be regulated, suppressed, or re-established or being in the service of anyone so advertising; (c) indulging in the drug habit; (d) conviction of an offense involving moral turpitude.

150.06 **Penalty.** Violation of this chapter shall be punished by fine of not less than twenty-five nor more than one hundred dollars for each offense, or by imprisonment not exceeding six months, or both.

CHAPTER 154

CHIROPODY.

154.01 **Practice.** (1) The practice of chiropody is the diagnosis or mechanical or surgical treatment, or treatment by the local application of drugs, of abnormal nails, or superficial excrescences on the hands and feet, such as corns, warts and callouses, or fissures and bunions, or the diagnosis or mechanical but not surgical treatment of congenital or acquired deformities of the feet, but does not include surgical operations upon the hands or feet for congenital or acquired deformities or conditions requiring the use of an anesthetic other than local, nor incisions involving structures below the skin,

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nor any portion or organ of the body above the feet, except that the diagnosis and mechanical treatment shall include the tendons and muscles of the lower leg in so far only as they shall be involved in the enumerated conditions of the feet.

(2) No person shall practice chiropody, for compensation, direct or indirect, or in the expectation thereof, or attempt to do so, or designate himself a registered chiropodist or use the title "R. C.," or other title or letter indicating that he is a chiropodist, or otherwise directly or indirectly represent or hold himself out as such, unless registered by the state board of medical examiners and the certificate recorded. This does not prohibit a physician from treating the feet, nor a lawfully qualified non-resident chiropodist meeting registered chiropodists in this state in consultation. The provisions of this chapter shall not apply to the sale of corrective shoes, arch supports or similar mechanical appliances.

154.02 **Application.** The applicant shall file written application on forms provided by the board, and satisfactory proof that he is more than twenty-one years of age, of good moral and professional character, has preliminary education equivalent to the completion of an approved three year course in an accredited high school, and after July 1, 1926, equivalent to graduation from an accredited high school, and has completed in a reputable school of chiropody a course, at least equivalent to two years of thirty-seven weeks of thirty class hours each, in anatomy and physiology of the feet, and diagnosis of the foot ailments and deformities which the chiropodist is authorized to treat, materia medica, chiropodial orthopedics, bacteriology, pathology, histology, therapeutic chemistry, and minor surgery and bandaging pertaining to ailments of the feet and the mechanical treatment of congenital or acquired deformities of the feet, pay twenty dollars, and present himself for examination at the first meeting thereafter at which examinations are to be held. The fee shall not be refunded unless from sickness, or other good cause to the satisfaction of the board, the applicant was prevented from completing the examination; subsequent examinations under the application may be given in the discretion of the board without payment of additional fee.

154.03 **Examination.** Examination shall be both scientific and practical, and written in English, in anatomy and physiology of the feet, and diagnosis of the foot ailments and deformities which the chiropodist is authorized to treat, materia medica, chiropodial orthopedics, bacteriology, pathology, histology, therapeutic chemistry, and minor surgery and bandaging pertaining to ailments of the feet, not including any amputation, and the mechanical treatment of congenital or acquired deformities of the feet, and may be supplemented by oral examination. The board may select a registered chiropodist to conduct the examination or any part under its supervision, and he shall receive the same compensation as members of the board.

154.04 **Certificate.** If the board find the applicant qualified, it shall issue a certificate of registration,

which the recipient shall record with the county clerk of any county in which he shall practice, as provided in section 147.02. The certificate shall expire on February 1 of each year, and shall be renewed only upon application to the board on or before January 1. If the applicant for re-registration has been guilty of conduct that would afford a ground for revocation under section 147.05, the board may so find, and refuse to re-register such applicant.

154.05 **Revocation.** The certificate may be revoked as provided in section 147.20, and for any of the causes enumerated in that section, or for advertising or holding out to successfully treat or cure all ailments of the feet or any ailment manifestly incurable, or chronic and persistent inebriety, or presenting to the board any diploma, license or certificate illegally obtained, or signed or issued unlawfully or under fraudulent representations.

154.06 **Penalties.** (1) Any person practicing or holding himself out as practicing chiropody, not being registered, and certificate recorded, shall be punished, for a first offense by fine of not less than fifty dollars nor more than one hundred dollars, and for a subsequent offense by fine of not less than one hundred nor more than two hundred fifty dollars, or imprisonment not less than six months, or both.

(2) Any person shall be fined not less than fifty nor more than two hundred dollars or imprisoned not less than thirty days nor more than six months, or both who shall:

(a) Sell or barter or offer to sell or barter a diploma or document conferring or purporting to confer a chiropodist degree, or a certificate or transcript, made or purporting to be made, pursuant to the laws regulating the registration of chiropodists.

(b) Purchase or procure by barter such a diploma, certificate or transcript, with intent that the same shall be used as evidence of the holder's qualification to practice chiropody, or in fraud of the laws regulating such practice.

(c) With fraudulent intent, alter in a material regard such a diploma, certificate or transcript.

(d) Use or attempt to use such a diploma, certificate or transcript which has been purchased, fraudulently issued, counterfeited or materially altered, either as a license or color of license to practice chiropody, or in order to procure registration as a chiropodist.

(e) Practice chiropody under a false or assumed name.

(f) Assume any title or append any letters to his name with intent to represent falsely that he has received a chiropodist degree or certificate of registration.

The city clerk is not authorized to receive death certificates or issue burial permits unless he has been appointed as a deputy by the health officer. Under the law the health officer in cities is the local registrar for the collection of all vital records.

Announcing the Fourth Annual

Physiotherapeutic Convention

Arrangements have been perfected for a really elaborate Physiotherapeutic Convention to be held at the

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There will be lectures, clinics and demonstrations, all in charge of well-known physicians and surgeons. For purposes of demonstration, carefully prepared papier-mache or wax figures and live models will be used, and in some instances live models will be employed for this purpose.

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- MILES J. BREUER, M.D.
Lincoln, Neb.
- W. B. CHAPMAN, M.D.
Carthage, Mo.
- M. H. COTTLE, M.D.
Chicago, Ill.
- ELKIN P. CUMBERBATCH, M.D.
London, England
- LEO C. DONNELLY, M.D.
Detroit, Mich.
- EMILE C. DUVAL, M.D.
Chicago, Ill.
- RAYMOND F. ELMER, M.D.
Chicago, Ill.
- J. C. ELSOM, M.D.
Madison, Wis.
- F. H. EWERHARDT, M.D.
St. Louis, Mo.
- GEORGE W. FUNCK, M.D.
Chicago, Ill.
- J. U. GIESY, M.D.
Salt Lake City, Utah
- DEAN W. HARMAN, M.D.
Salt Lake City, Utah
- E. C. HENRY, M.D.
Omaha, Neb.
- A. R. HOLLENDER, M.D.
Chicago, Ill.
- WM. E. HOWELL, M.D.
Chicago, Ill.
- ARTHUR E. JOSLYN, M.D.
Lynn, Mass.

The Convention will be subdivided into the following sections:

- Eye, Ear, Nose and Throat.
- Internal Medicine and Gynecology and Urology.
- Pediatrics.
- Orthopedics and Surgery.
- Industrial Physiotherapy.
- Dermatology, including Malignancies.
- Miscellaneous Practice.

Special rooms will be provided on the mezzanine floor for smaller groups attending clinics and round table discussions, and for demonstrations to follow up interesting talks delivered from the platform. There will also be clinics at Chicago hospitals.

Admission will be by card only. A. M. A. rules will apply throughout; either an A. M. A. fellowship card or its equivalent will insure admission. Arrangements for accommodations, etc., will be attended to on request by the Educational Department of H. G. Fischer & Co., Inc.

A record attendance is anticipated. There were over seven hundred physicians and surgeons present at last year's Convention, and this year's record will be much higher. Those interested are advised to make plans now and

List of Speakers

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- DISRAELI W. KOBAK, M.D.
Chicago, Ill.
- GUSTAV KOLISCHER, M.D.
Chicago, Ill.
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HOSPITALS IN WISCONSIN

(Continued from Page 284.)

contributes to the support of veterans at the Wisconsin Veterans' Home and at the Memorial Hospital at Farwell's Point. If the beds at these institutions are added we have a total of 1,700 beds or about eight per cent of all the hospital beds in the state in institutions designed for the medical care of veterans.

Of the remaining 20,525 beds, 9,475 or nearly half are in institutions for the care of chronic conditions, insanity 6,950, feeble-mindedness 1,575, tuberculosis 850, and other conditions 100. Of these beds less than five per cent are in privately controlled benevolent institutions. Over 95 per cent of the beds for these patients are in institutions under state, county, or municipal control. In addition there are many patients with chronic conditions in other public institutions. While the daily cost of caring for patients of this type is small the total expense is very large. The importance of the stitch in time is becoming increasingly apparent.

In institutions designed for the treatment of conditions which as a rule require prolonged treatment, and for which the treatment is likely to be the more effective the earlier it is begun, institutions classed as designed for acute to chronic in the table, there are 3,925 beds or about a fifth of the beds outside of those provided for veterans. Of these 2,725 or about two-thirds are institutions for treatment of nervous and mental conditions, 325 in institutions for the treatment of incipient tuberculosis, and 875 in institutions for the care of general constitutional conditions. These last are in private institutions restricted in the main to the well-to-do. Of the beds in institutions for the care of early mental and nervous cases 400 or about 15 per cent are in private institutions which in the main are better equipped for treatment than the public institutions. About a sixth of the 325 beds in institutions for the care of incipient tuberculosis are in private institutions, a sixth in philanthropic and two-thirds in public institutions. In addition the county institutions make provision for the care of incipient as well as advanced tuberculosis and might be included in the acute to chronic rather than the chronic division. Both state and county institutions offer excellent care and furnish over 90 per cent of the institutional

TABLE I.—NUMBER OF INSTITUTIONS FOR THE CARE OF THE SICK IN WISCONSIN IN 1924, NUMBER OF PATIENT BEDS IN THESE INSTITUTIONS, TYPE OF DISEASE CHIEFLY INVOLVED, AND TYPE OF HOSPITAL CONTROL. THE NUMBER OF PATIENT BEDS IS EXPRESSED IN ROUND NUMBERS.

Type of Institutional Control	Number of institutions designed primarily for a given type of disease and number of beds therein.												Total for all types of Control													
	Mainly Chronic						Acute to Chronic							Acute												
	Insanity		Feeble-mindedness		Tuberculosis		Other		Total		Nervous and Mental				Tuberculosis		Constitutional		Total		General		Total			
Inst.	Beds	Inst.	Beds	Inst.	Beds	Inst.	Beds	Inst.	Beds	Inst.	Beds	Inst.	Beds	Inst.	Beds	Inst.	Beds	Inst.	Beds	Inst.	Beds	Inst.	Beds			
Federal		
State		
County		
Municipal		
Total public	36	6950	2	1275	14	850	1	175	63	9250	7	2875	3	775	1	450	11	3900	7	375	12	975	19	1350	83	14500
Philanthropic Secular	
Denominational	
Total Philanthropic	
Private Corporation	
Private Partnership	
Total Private	
Total for each type of disease..	36	6950	4	1575	14	850	3	275	57	9650	18	3175	6	875	14	1325	38	5375	7	375	113	6825	120	7200	215	22225

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provision in the state for the care and treatment of tuberculosis. What has been done in this state along these lines has been more than justified by the decline in tuberculosis in recent years. Through preventive measures and through provision for treatment the state has in this field done its most effective work thus far in reducing the burden of caring for the chronically sick.

For care of general constitutional conditions there are no public or philanthropic provisions made except those in general hospitals. Sanitariums for the treatment of these conditions are private institutions designed primarily for the well-to-do. A considerable proportion of inmates of charitable institutions for custodial care are there as a result of ineffective early treatment of constitutional conditions. It is probable that the most effective work in the control of these conditions in individuals of average means can be done by combining special hospital diagnosis and treatment with home care under the supervision of the family physician. For those for whom this is not available convalescent homes established in connection with general hospitals would, however, furnish a less expensive and more effective type of care than the prolonged care of such patients in hospitals designed for treatment of acute conditions.

Of the hospital beds in the state in non-federal institutions 7,125 or over one-third are designed primarily for the care of acute conditions. Of these 1,275 or about 18 per cent are under public control, 5,100, or about 72 per cent, under philanthropic control and 750 or about 10 per cent under private control. Those under philanthropic and private control receive practically their entire support from fees of private patients chiefly surgical. For the care of some of the patients in these institutions municipal and county governments and voluntary contributions are received. For the care of patients in the institutions under public control the main support comes from taxation although in most institutions at present those who can afford to do so are expected to pay for cost of care and some of their support comes from this source. Of these the largest and most recent is the Wisconsin General Hospital with 425 beds.

Of these beds 60 are designed primarily for the care of students at the University, leaving 365 for general state purposes. The latter are designed primarily for the care of patients who otherwise

would be without resources for adequate care either because of lack of funds or because of lack of local facilities for special types of diagnosis and treatment. Through cooperation with the home physician it is believed that the hospital will do much to restore to health and happiness many who otherwise might become a burden to themselves and others.

Furthermore, through care of these patients under expert supervision, young men and women will be trained to become good physicians and good nurses and thus of great public service. Through the unusual advantages offered by the University for scientific research the hospital has as not the least of its duties the extension of medical knowledge.

INTER-STATE POSTGRADUATE ASSEMBLY OF AMERICA

The annual session of the Inter-State Postgraduate Assembly will be held in St. Paul, October 12-16, inclusive. The scientific program, exhibits and registration will all be at the municipal auditorium with headquarters at the Saint Paul Hotel.

The meeting will be held under the auspices of the Ramsey County Medical Society, St. Paul. Hotel reservations may be made through Dr. George Earl, 1210 Lowry Bldg., St. Paul, chairman of the Hotel Committee, or by communicating with any hotel direct.

The scientific program will begin each morning at 7 a. m. and will occupy morning, afternoon and evening. Following the addresses Wednesday evening an informal entertainment will be offered by the Ramsey County Medical Society in conjunction with a reception in honor of Dr. A. C. Page, president of the Assembly. The banquet, which will be open to the public as well as to the members and their ladies, will be held at the Saint Paul Hotel Friday evening. Addresses will be given by distinguished citizens from America and foreign countries.

An unlicensed person who has failed in an examination for the licensing of embalmers has the same legal status as an apprentice. He may do embalming only under the immediate direction and supervision of a licensed person. This board is not authorized to issue a temporary permit to do embalming.

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HYGEIA AND LAY EDUCATION

(Continued from page 345.)

We asked: Do your members or other speakers selected by your society give health talks or addresses before lay audiences? Of the state societies, 21 said yes, and 9, no. Of the county societies 220 said yes, and 209, no.

We asked if they would use a revised or modified handbook and illustrative material, and practically all said yes.

We asked how many were using the radio for the purpose of disseminating health information. We learned that 13 state societies had used the radio, and 27 had not. Twenty-four county societies had used the radio; 407 had not.

HEALTH ASSOCIATIONS

One of the most effective methods of extending this health propaganda is through the medium of health associations such as the one formed in Maine. Maine, I think, has the most effective organization of this type. The state medical society initiated this movement and invited the other state organizations, the Federation of Women's Clubs, for example, the state labor organizations, the manufacturers' organizations, and so on, to join with the department of public health on one side, and the state medical society on the other in the organization of a state health association to promote the health betterment of the state. It has been a very successful organization. As I see it now, this is the most promising method of extending health activities through the states. We must hook up the professional men with the laymen in this project of arousing an interest in health betterment on the part of the people of the state.

I shall return to that presently, for I want to discuss it in connection with Hygeia.

The reply to this question was that in 22 states some form of health association had been organized, and in 18 not, while 156 county societies have effected some sort of an organization of this type, and 258 have not.

Health exhibits for the public, not the profession, is one of the effective and growing means of disseminating information among the public. Twenty-three states have held exhibits of that sort, and 17 have not; while 190 county societies state that they have given health exhibits, and 232 have not.

Another question had reference to the cam-

paigns or clinics such as anti-tuberculosis, infant welfare, control of cancer and the like. We learned that such campaigns had been conducted in 17 states, and in 23 not, while 292 county societies had held such campaigns, and 202 had not.

Finally, a question was asked about periodic health examinations. You will remember that when the American Medical Association committed itself to the project of periodic examinations of apparently healthy persons in San Francisco in 1923, the county medical societies were definitely instructed to hold meetings for the purpose of promoting this movement. In spite of that fact, only 98 have paid any attention to this matter; 324 have not. In the state societies 14 have given the matter thought, and 28 have not. I should like to say in connection with this matter of periodic health examinations that a new Manual of Suggestions as to the conduct of these examinations has just come from the press of the American Medical Association and is now to be had at the nominal price of 20 cents a copy. It is an elaboration of the original report of Dr. Emerson's committee, the new part dealing more especially with the health advice to be given to patients after the examination has been held.

Now just a word as to these state associations. I wish there might be established in every state an organization similar to the one in Maine. There are, by the way, such organizations in several other states. I refer to that because it seems to me to be organized on the best lines. If we could have in every state those persons interested in the prevention of tuberculosis, in infant welfare, in the anti-venereal crusade, in prophylaxis of venereal diseases, and the like, organized with the profession into a great state health association with a large membership, Hygeia being the official organ of this movement and being supplied to its members for the annual dues, it might be possible to develop a circulation, a dissemination of information through that medium comparable to that which has been attained by the National Geographic Magazine. I presume most of you take that beautiful magazine. You take it nominally as members of a national organization, and yet you haven't a particle of interest in that organization outside of the magazine.

In the health association the interest would be, it seems to me, much keener than that. Here is

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something in which every person is interested—the health betterment of his community and his state. I should like very much to see an effort made in each state to organize a health association of that type, Hygeia to become the official organ of the state associations, and in that way gain a very wide and effective circulation.

DISCUSSION.

PRESIDENT CUNNINGHAM: We will now call upon one of our own members to discuss these papers, Dr. Joseph Smith.

DR. JOSEPH SMITH, Wausau: Mr. Chairman, the hour is late and the value of this discussion will depend very largely upon securing expressions of opinion from a large number, so I am only going to touch upon one or two points very briefly in the hope that there may be others here who will elaborate these more in detail.

In the first place, I think the physicians of Wisconsin are to be congratulated upon the cooperative attitude which the State Board of Health has adopted as its policy towards the practitioners of medicine in the state of Wisconsin, as outlined by Dr. Fiedler this evening.

Referring to the organizations described by Dr. Harris, which are organized for the purpose of, as Dr. Harris puts it, jobbing medical services to the laity, I am convinced that the general medical profession does not understand the real import of this movement. I think these organizations have taken advantage of the tendency toward periodic health examinations and have jumped into the arena and proceeded to commercialize this service, hiring physicians on salary and at altogether too small a salary in many instances, and then retailing the information to the public. I believe that many of the physicians who have joined these organizations do not fully understand the import of the movement. I am sure if they did, they would not ally themselves with such organizations.

I was sorry in a way that Dr. Harris did not have time this evening to elaborate more in detail some of the information which he has on this subject. Those of us who had the privilege of hearing Dr. Harris discuss this subject in the American Medical Association know that he has an immense fund of facts which are rather astounding.

I think it would be wise for the State Medical Society of Wisconsin and the county societies to take some notice of the movement looking toward periodic health examination. I think the medical profession is missing an opportunity if this matter is not given some attention.

Another point that seems to me of importance—and perhaps this has had a good deal to do with the development of some of these institutions that we have heard discussed tonight—is our seeming indifference toward the attitude of the public. Dr. Wilbur, in his inaugural address as president of the American Medical Association, pointed out the importance of the physicians furnishing to the public the fund of information which they have available, that is, not actually furnishing them the information, but giving them the benefit of the information. He suggested that if the knowledge which physicians possess could be made generally available, there would be a very decided addition to the health and longevity of the population in general.

I believe that our state and county societies should connect themselves up with the public in a more definite way than they have been in the habit of doing heretofore. I believe that the medical men have left too much to outside agencies. I believe that we have missed an opportunity for connecting up our local units with the public in general and have failed to secure their support and sympathy because we have not connected up our work with the community in which we live. I believe that every county society should get in touch with the various lay clubs

and lay organizations and cooperate with them in some definite form of local health service or local health program. (Applause.)

PUBLIC HEALTH NOTES
FROM THE
STATE BOARD OF HEALTH

No person, a physician was informed, has a right to transport a child with whooping cough or other communicable disease from one place to another or to permit such child to leave the home premises without the consent of the health officer. A parent may be arrested and fined for so doing.

A hospital head was advised there is no statute governing the location of isolation hospitals. It is recommended, however, that they be constructed to or as a part of a general hospital so that one superintendent can act for both. Nurses should be assigned only to one type of duty.

As a general rule, it was stated, health officers and other public officials are protected from individual liability so long as they act within their jurisdiction, without malice or negligence and with reasonably good judgment, but they cannot in any event be protected even by statute if they overstep their jurisdiction and act in an unreasonable manner.

“A health officer may be held liable for negligence in quarantining a case of scarlet fever if he fails to act promptly, as the law requires. Where the act is one which requires the exercise of judgment, as in the abatement of a nuisance, if the health officer uses reasonably good judgment in enforcing what he believes to be necessary to abate the nuisance, he will not be held liable for any action taken.

“It is necessary for every health officer, both for his own protection and in the interest of efficiency, to be thoroughly conversant with the scope of his jurisdiction and to adhere to procedures which are established and generally recognized.”

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THERAPEUTIC NOTES

NEW AND NONOFFICIAL REMEDIES

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Schick Test.

Typhoid-Paratyphoid Bacterial Vaccine Immunizing Laboratory Products Co.:

Protein S. M. A. (Acidulated).

Eli Lilly & Co.:

Antistreptococic Serum.

Normal Horse Serum.

Pertussis Vaccine.

Pneumococcus Vaccine Prophylactic.

Staphylococcus Aureus Vaccine.

Staphylococcus Vaccine.

Streptococcus Vaccine.

Vaccine Virus.

Mallinckrodt Chemical Works:

Bromeikon—

Bromeikon 5 Gm. Ampules.

Merrell-Soule Company:

Vi-Mal-Dex (Orange).

H. K. Mulford Co.:

Pertussis Bacterin—Mulford.

Typho Bacterin.

Typho-Serobacterin.

Typho-Serobacterin—Mulford Mixed.

National Aniline & Chemical Co.:

Tetraiodophthalein Sodium—"National"—

Tetraiodophthalein Sodium—"National" Vials 3½ Gm.

Parke, Davis & Co.:

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Nonproprietary Articles:

Tetrabromphthalein Sodium (formerly called Tetrabromphenolphthalein Sodium).

Tetraiodophthalein Sodium.

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Protein Extracts—Mulford. Liquids obtained by extracting the protein of substances believed to be the cause of specific sensitization. For a discussion of the actions and uses, see Allergic Protein Preparations (New and Nonofficial Remedies, 1925, p. 278). Protein Extracts—Mulford are used both for diagnosis and treatment. They are marketed in 5 c.c. vials. The fol-

lowing preparations have been accepted: Almond Protein Extract—Mulford, Apple Protein Extract—Mulford, Asparagus Protein Extract—Mulford, Banana Protein Extract—Mulford, Barley Protein Extract—Mulford, Bean (Lima) Protein Extract—Mulford, Bean (Navy) Protein Extract—Mulford, Bean (String) Protein Extract—Mulford, Beef Protein Extract—Mulford, Beet Protein Extract—Mulford, Buckwheat Protein Extract—Mulford, Cabbage Protein Extract—Mulford, Cantaloupe Protein Extract—Mulford, Carrot Protein Extract—Mulford, Cat Hair Protein Extract—Mulford, Cauliflower Protein Extract—Mulford, Celery Protein Extract—Mulford, Chicken Protein Extract—Mulford, Chicken Feather Protein Extract—Mulford, Cattle Dander Protein Extract—Mulford, Clam Protein Extract—Mulford, Cocoa Protein Extract—Mulford, Codfish Protein Extract—Mulford, Coffee Protein Extract—Mulford, Corn Protein Extract—Mulford, Cucumber Protein Extract—Mulford, Dog Hair Protein Extract—Mulford, Eggplant Protein Extract—Mulford, Egg White Protein Extract—Mulford, Egg Yolk Protein Extract—Mulford, Flaxseed Protein Extract—Mulford, Goose Feather Protein Extract—Mulford, Guinea-Pig Hair Protein Extract—Mulford, Horse Dander Protein Extract—Mulford, Horse Serum Protein Extract—Mulford, Kapok Protein Extract—Mulford, Lamb Protein Extract—Mulford, Lettuce Protein Extract—Mulford, Lobster Protein Extract—Mulford, Mackerel Protein Extract—Mulford, Milk Protein Extract—Mulford, Mushroom Protein Extract—Mulford, Oat Protein Extract—Mulford, Onion Protein Extract—Mulford, Orange Protein Extract—Mulford, Orris Root Protein Extract—Mulford, Oyster Protein Extract—Mulford, Pea Protein Extract—Mulford, Peanut Protein Extract—Mulford, Pepper (Black) Protein Extract—Mulford, Pork Protein Extract—Mulford, Potato Protein Extract—Mulford, Rabbit Hair Protein Extract—Mulford, Rice Protein Extract—Mulford, Rice Powder (Polish) Protein Extract—Mulford, Rye Protein Extract—Mulford, Salmon Protein Extract—Mulford, Spinach Protein Extract—Mulford, Squash Protein Extract—Mulford, Strawberry Protein Extract—Mulford, Sheep's Wool Protein Extract—Mulford, Sweet Potato Protein Extract—Mulford, Tea Protein Extract—Mulford, Tomato Protein Extract—Mulford, Veal Protein Extract—Mulford, Walnut Protein Extract—Mulford, Wheat Protein Extract—Mulford. H. K. Mulford Co., Philadelphia.

Insulin—Squibb 10 Units, 10 c.c. Each c.c. contains 10 units of insulin—Squibb (New and Nonofficial Remedies, 1925, p. 174). E. R. Squibb & Sons, New York.

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Neo-Silvol Ointment 5 Per Cent. An ointment composed of neo-silvol (New and Nonofficial Remedies, 1925, p. 379), 5 per cent in a base composed of glycerin, benzoated lard, hydrous wool fat and petrolatum. Parke, Davis & Co., Detroit.

Mercurosal Solution. Each c.c. contains mercurosal (New and Nonofficial Remedies, 1925, p. 234), 0.025 gm. (5/13 grain) in distilled water containing 0.1 per cent of sodium citrate. Parke, Davis & Co., Detroit. (Jour. A. M. A., Sept. 5, 1925, p. 745.)

Proteins Dried—Mulford. Powders representing the proteins of substances believed to be the cause of specific sensitization. For a discussion of the actions and uses, see Allergic Protein Preparations (New and Nonofficial Remedies, 1925, p. 278). Proteins dried—Mulford are intended for diagnosis only. One milligram of the dried protein is rubbed into an abrasion of the skin to which has been applied a drop of physiological solution of sodium chloride or of tenth-normal sodium hydroxide solution. The appearance of an urticarial wheal indicates sensitiveness to the particular protein used. They are marketed in packages of one capillary tube containing a needle and sufficient protein for one test; in packages of six capillary tubes; and in vials containing 50 mg. of the protein. The following proteins dried—Mulford have been accepted: Almond Protein Dried—Mulford, Apple Protein Dried—Mulford, Asparagus Protein Dried—Mulford, Banana Protein Dried—Mulford, Barley Protein Dried—Mulford, Bean (Lima) Protein Dried—Mulford, Bean (Navy) Protein Dried—Mulford, Bean (String) Protein Dried—Mulford, Beef Protein Dried—Mulford, Beet Protein Dried—Mulford, Buckwheat Protein Dried—Mulford, Cabbage Protein Dried—Mulford, Cantaloupe Protein Dried—Mulford, Carrot Protein Dried—Mulford, Cat Hair Protein Dried—Mulford, Cattle Dander Protein Dried—Mulford, Cauliflower Protein Dried—Mulford, Celery Protein Dried—Mulford, Chicken Protein Dried—Mulford, Chicken Feather Protein Dried—Mulford, Clam Protein Dried—Mulford, Cocoa Protein Dried—Mulford, Codfish Protein Dried—Mulford, Coffee Protein Dried—Mulford, Coli (Communis) Bacillus Protein Dried—Mulford, Corn Protein Dried—Mulford, Cucumber Protein Dried—Mulford, Diphtheroid (Polyvalent) Bacillus Protein Dried—Mulford, Dog Hair Protein Dried—Mulford, Dysentery Bacillus (Polyvalent) Protein Dried—Mulford, Eggplant Protein Dried—Mulford, Egg White Protein Dried—Mulford, Egg Yolk Protein Dried—Mulford, Flaxseed Protein Dried—Mulford, Friedlander Bacillus Protein Dried—Mulford, Goose Feather Protein Dried—Mulford, Gonococcus Bacillus (Polyvalent) Protein Dried—Mulford, Guinea-Pig Hair Protein Dried—Mulford, Horse Dander Protein Dried—Mulford, Horse Serum Protein Dried—Mulford, Influenza Bacillus Protein Dried—Mulford, Kapok Protein Dried—Mulford, Lamb Protein Dried—Mulford, Lettuce Protein Dried—Mulford, Lobster Protein Dried—Mulford, Mackerel Protein Dried—Mulford, Meningococcus Bacillus (Polyvalent) Protein Dried—Mulford Micro-

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Radon—Standard Chemical Co. A brand of radon—N. N. R. For a discussion of radon, its actions and uses, see New and Nonofficial Remedies, 1925, p. 313. Radon—Standard Chemical Co. is supplied in the form of "implants" (minute glass tubes suitable for embedding in tumors), and in the form of larger tubes. Radium Chemical Co., Pittsburgh (Jour. A. M. A., Sept. 12, 1925, p. 825).

Iodipin 40 Per Cent. An iodine addition product of sesame oil, containing from 39 to 41 per cent of iodine in organic combination. Iodipin 40 Per Cent is used as a contrast medium in myelography and pyelography for detecting urethral strictures and in the spinal column for the location of tumors. It is supplied in bulk and in ampules containing, respectively, 1 c.c. and 2 c.c. Merck & Co., New York.

Pertussis Bacterin—Mulford (New and Nonofficial Remedies, 1925, p. 354). This is also marketed in packages of one 5 c.c. vial containing 2,000 million killed pertussis bacilli per c.c.; of one 20 c.c. vial containing 2,000 million killed pertussis bacilli per c.c.; and of four vials containing, respectively, 250, 500, 1,000 and 2,000 million killed pertussis bacilli per c.c. H. K. Mulford Co., Philadelphia.

Typho-Serobacterin (New and Nonofficial Remedies, 1925, p. 368). This is also marketed in packages of three syringes containing, respectively, 1,000, 2,000 and 2,000 million killed sensitized typhoid bacilli; of three 1 c.c. vials, containing, respectively, 1,000, 2,000 and 2,000 million killed sensitized typhoid bacilli; and in thirty 1 c.c. vials, constituting ten tests of three doses. H. K. Mulford Co., Philadelphia.

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official Remedies, 1925, p. 369). This is also marketed in packages of three hypo-units containing consecutive doses of a mixture of killed sensitized typhoid bacilli, killed sensitized paratyphoid bacilli A and killed sensitized paratyphoid bacilli B; of thirty 1 c.c. vials being ten tests of three doses of a mixture of the three bacilli. H. K. Mulford Co., Philadelphia (Jour. A. M. A., Sept. 19, 1925, p. 901).

Theocalcin. A double salt or mixture of calcium theobromine and calcium salicylate. It contains not less than 44 per cent of theobromine. Theocalcin acts like theobromine, but is claimed to be less likely to produce gastric irritation than the official theobromine sodio-salicylate. It is supplied in bulk and in 7½ grain tablets. E. Bilhuber, New York.

Vi-Mal-Dex (Orange). A mixture containing, approximately, maltose, 28 per cent; dextrose, 10 per cent; dextrin, 48 per cent; orange juice sugars, 9 per cent; citric acid, 1 per cent; ash, 1 per cent; moisture, 3 per cent. One hundred gm. contains the equivalent of 93.5 c.c. of fresh orange juice. Vi-Mal-Dex (Orange) is proposed as a carbohydrate food for use in the feeding of infants. In addition to the carbohydrates, dextrose, maltose and dextrin, it presents the antiscorbutic properties of orange juice. For use, Vi-Mal-Dex (Orange) is mixed with water or milk. Merrell-Soule Co., Syracuse, New York.

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Tetraiodophthalein Sodium. Tetraiodophenolphthalein sodium. The sodium salt of a dibasic dye, tetraiodophenolphthalein. Tetraiodophthalein sodium contains not less than 53 per cent of iodine. It is used for the roentgenologic examination of the gallbladder. Following the intravenous injection or, if decomposition is avoided, the oral administration, the substance appears in the normal gallbladder in sufficient concentration to cast a shadow to the Roentgen ray. The use of tetraiodophthalein sodium is in the experimental state and workers are cautioned as to the selection of types of cases in which it is indicated and its possible toxicity in large doses.

Iodeikon. A brand of tetraiodophthalein sodium—N. N. R. It is supplied in bulk and in 3.5 gm. ampules. Mallinckrodt Chemical Works, St. Louis.

Tetraiodophthalein Sodium—"National." A brand of tetraiodophthalein sodium—N. N. R. It is supplied in

bulk and in 3.5 gm. vials. National Aniline and Chemical Co., New York (Jour. A. M. A., Sept. 26, 1925, p. 975).

Typhoid Vaccine X Plain.—A typhoid vaccine (New and Nonofficial Remedies, 1925, p. 360) marketed in single 1 c.c. carpule (tube) packages containing 500 million killed bacteria per c.c.; in packages of ten 1 c.c. carpules, each containing 500 million killed bacteria per c.c.; in packages of four 1 c.c. carpules; each containing 1,000 million killed bacteria per c.c. and in packages of ten 1 c.c. carpules, each containing 1,000 million killed bacteria per c.c. Cook Laboratories, Inc., Chicago.

Typhoid Vaccine XX Combined.—A typhoid vaccine (New and Nonofficial Remedies, 1925, p. 360) marketed in single 1 c.c. carpule (tube) packages containing 500 million killed *Bacillus typhosus*, 375 million killed *Bacillus paratyphosus A* and 375 million killed *Bacillus paratyphosus B* per c.c.; in packages of ten 1 c.c. carpules each containing 500 million killed *Bacillus typhosus*, 375 million killed *Bacillus paratyphosus A* and 375 million *Bacillus paratyphosus B* per c.c.; in single 1 c.c. carpule packages containing 1,000 million killed *Bacillus typhosus*, 750 million killed *Bacillus paratyphosus A* and 750 million killed *Bacillus paratyphosus B* per c.c. and in packages of ten 1 c.c. carpules each containing 1,000 million killed *Bacillus typhosus*, 750 million killed *Bacillus paratyphosus A* and 750 million killed *Bacillus paratyphosus B* per c.c. Cook Laboratories, Inc., Chicago.

Acne Vaccine Combination X.—A mixed bacterial vaccine (New and Nonofficial Remedies, 1925, p. 365) marketed in packages of four 1 c.c. carpules (tubes) containing, respectively 262 million 500 thousand, 525 million, 787 million 500 thousand and 1,050 million killed bacteria per c.c.; in single 1 c.c. carpule packages containing 1,050 million killed bacteria per c.c. and in packages of ten 1 c.c. carpules each containing 1,050 million killed bacteria per c.c. Cook Laboratories, Inc., Chicago.

Caprokol.—Hexylresorcinol—S. & D.—Normal hexylresorcinol, containing not more than 5 per cent of the intermediate product hexylresorcinol. Caprokol possesses marked germicidal properties; is stated to have a phenol coefficient of 45 and to be relatively non-toxic when administered by mouth. When administered, it imparts definite germicidal properties to the urine. Administration of caprokol to normal individuals caused secretion of urine which killed *Bacillus coli* and *Staphylococcus albus*, but the effect of the drug was not constant. Caprokol is proposed for the treatment of urinary infections. The drug is marketed in the form of capsules hexylresorcinol—S. & D., each containing 0.15 gm. dissolved in olive oil. Sharp and Dolme, Baltimore.

About seventy-five members left their subscriptions for Hygeia in the special booth of the American Medical Association at the Annual Meeting. Starting with the Annual Meeting Wisconsin has secured the services of Miss Elza K. Zinke of the Hygeia staff in a special campaign for the state. Miss Zinke is now visiting county societies in all sections.



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HARRISON NARCOTIC LAW

(Continued from page 441.)

drugs thereon, would become liable. Exceptions to this rule and regulations are where physicians prescribe for an incurable disease such as are recognized by the medical profession or where the prescription was issued to an aged and infirm addict. With reference to the two exceptions outlined above each registrant should supply himself with mimeograph No. 316, which outlines the treatment of narcotic drug addicts permissible under the Harrison Narcotic Law. This mimeograph will be sent upon request. In executing or writing prescriptions a physician must date and sign the prescription as of the date when it was issued. The prescription must bear the full name and address of the patient and the name, address and registry number of the practitioner. The prescription must be written in ink or indelible pencil. Where a physician writes a prescription for an incurable or an aged and infirm addict and where such prescription will be written for an undeterminable length of time, he should endorse thereon either exception No. 1 which covers the treatment of incurable diseases or exception No. 2 which covers an aged and infirm addict. Although the law does not state the amount which a physician should prescribe, he should in all cases prescribe the minimum quantity necessary for the treatment of his certain case.

DISPENSING-RECORDS

Practitioners are permitted to dispense narcotics to

THE INDIVIDUAL PHYSICIAN AND THE AMERICAN MEDICAL ASSOCIATION

"Why should I be a Fellow of the American Medical Association?"

"In what way do its activities affect me, the individual practitioner of medicine?"

These are fair questions. You who are invited to be a Fellow have a right to ask for evidence that the Association is functioning actively in the interests of physicians. The following partial inventory of its activities is therefore presented. It shows in a brief way what the American Medical Association means to physicians individually and to the profession in general. Every member in good standing is eligible for Fellowship. All that is necessary to qualify is to make application and subscribe for The Journal.

HOW THE ASSOCIATION FUNCTIONS

A large, nation-wide organization must necessarily delegate its activities to smaller bodies or to individuals. The House of Delegates of the Association determines its policies. The Board of Trustees is the governing body in the interval and is charged with the duty of administering the affairs of the Association.

The work of the American Medical Association is carried out largely through its executive officers, its various councils, its bureaus and its publications. Every Fellow and member should consider these as his representatives.

MEDICAL EDUCATION AND HOSPITALS

This body has brought the standards of both pre-

bona fide patients without prescriptions or order forms. However, a record of drugs so dispensed must be kept except when the practitioner is in personal attendance upon the patient. A practitioner is not regarded as a personal attendant upon a patient within the intent of the statutes unless he is in personal attendance upon such patient away from his office. The record of dispensing narcotic drugs should show the quantity of narcotic drugs or preparations dispensed or administered, the name and address of the person to whom dispensed or administered and the purpose for which it was dispensed or administered. With reference to registrants such as dentists, oculists, aurists, or other specialists engaged in a lawful profession, who administer in their office practice minute quantities of narcotics in the form of solutions, may keep a record of the date when a stock solution is made or purchased and the date when such stock solution is exhausted. Where pastes or ointments are made or purchased, a record of the date when the container is first opened and the date when its contents are exhausted may be kept.

GENERAL

A practitioner should report all cases of addiction coming to his attention, also file a statement of all legitimate incurable cases where prescriptions will be issued for a certain period. These reports are not compulsory by law but they will aid the taxpayer and the government in ferreting out the unscrupulous addict.

medical and medical education to a basis by which they are recognized throughout the world. Through its activities, extremes have been avoided, although college entrance requirements have been raised to a reasonable point, college sessions have been lengthened, courses, reorganized, better buildings and laboratories secured, better equipment provided, including libraries and museums, more and better teachers employed, better clinical material obtained and more improved methods of teaching adopted. Detailed information concerning all schools is maintained in the secretary's office. Undergraduate institutions are inspected and rated as "Class A," "Class B" or "Class C." All possible cooperation is given to an institution in its effort to raise its classification. There are now seventy "Class A" schools and the opportunities for a medical education in America are equal to those found anywhere.

In cooperation with state licensing boards, the Council works to secure better reciprocal relations for physicians and to improve medical practice laws. The Council also has elaborate facilities through which detailed information in regard to all medical students and physicians is regularly collected, and kept on file. This makes it possible to recognize and support the legally and educationally qualified professional man and to expose quacks, healers, "imposters and incompetents." In short, the Council stands as a guard to keep the medical field from being overrun and dis-

Merry Christmas Doctor

We want to take this opportunity to wish all the Doctors a Merry Christmas (and few calls on Christmas day) and extend our wishes for a Happy and Prosperous New Year.

It has been our privilege during the past year to become acquainted with many men of your profession, and to serve them in a business way, and it is our wish that in the coming year, more of you will feel free to use our services and facilities for sound investing.

Let us suggest here, that for a Christmas present for some loved one, a good bond can't be beat. And when making your selection—let us serve you.



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credited by entrance of the unfit. Its resources have been used with telling effect in the past, and continue in use today to protect the interests of those who are now legally qualified to practice medicine.

BIOGRAPHICAL DEPARTMENT

This department is under the supervision of the Council on Medical Education and Hospitals. Since 1905 it has been collecting personal data regarding licensed physicians and medical graduates for a biographical card index of physicians of the United States and Canada. These records are available to all Fellows of the Association. They enable members of the profession to keep tab on location, society affiliations, specialty, teaching connection and other personal data concerning colleagues. These data may be obtained either by writing to the Biographical Department or by consulting the AMERICAN MEDICAL DIRECTORY which is issued every two years and is a reliable, authentic register of over 95 per cent of the members of the profession.

HOSPITAL DEPARTMENT

This department keeps data on more than 7,500 hospitals and sanatoriums in the United States and Canada. It is at the service of each Fellow of the Association. It has facilities for telling him about institutions for unusual cases, for assisting in staff organization, for giving information regarding physicians' office buildings, group clinic buildings, combined offices and residences and hospital building plans; advice about the problems of cults in hospitals, data on group clinics, dispensaries, laboratories and general information regarding all hospitals whether general or special.

PHARMACY AND CHEMISTRY

Through the Council on Pharmacy and Chemistry, the Association offers protection to physicians in choosing proprietary remedies. Sixteen scientific men, each an authority in his special field, make up the Council. Newly introduced medicinal preparations are considered in the light of cold, scientific evidence. The findings are reported in *The Journal A. M. A.* and in the book "New and Nonofficial Remedies," issued annually. Here the physician can check up on claims made for medicinal preparations which he may be urged to use. In many cases, the Council finds that certain remedies marked under proprietary names and at exorbitant prices, are no more efficacious than the ordinary U. S. P. products. Many preparations are discovered to be irrational mixtures, many utterly inefficient for the purposes for

which they were made. Fellows of the Association are privileged at any time to obtain information from the Secretary of the Council relative to medicinal preparations.

INVESTIGATION DEPARTMENT

This department is a clearing house of data on patent and proprietary medicines, all forms of quackery and fake cures. The practical value of this information is proved by the thousands of letters of inquiry that are received annually by the Investigation Department from physicians in every state in the union and practically every foreign country of any size. Any physician desiring specific information on some preparation can feel free to write to the Investigation Department asking for details and facts. Each letter of this kind is given careful answer, and in the majority of cases, it is possible to send pamphlet or reprint of an article on the subject of his inquiry.

At times, the physician may wish to give a talk before his local Kiwanis or Rotary Club on some phase of the nostrum evil or quackery. The Investigation Department is always glad to send him data in the form of pamphlets and for a nominal fee will rent a set of lantern slides that may be used effectively in illustrating the talk. Forty large educational posters dealing with practically every phase of quackery and the nostrum evil are also available for health exhibits. These can be purchased for a nominal sum and in certain instances, the Investigation Department donates a set of posters to the cause.

HEALTH AND PUBLIC INSTRUCTION

The Bureau of Health and Public Instruction seeks to educate the public through the columns of *Hygeia*, a monthly magazine of individual and community health, by the dissemination through lay publications of carefully prepared articles, and through a series of instructive pamphlets written by recognized medical authorities. The Bureau also offers assistance in the compilation of material for addresses on health topics by supplying abstracts and illustrative material.

Health items from *Hygeia* are being broadcast from a number of radio stations and inserted in newspapers throughout the country.

Health material—posters, pamphlets, etc., are shown at health exhibits of lay associations. The Bureau cooperates, where possible, with other organizations such as the National Education Association in promoting health activities. The Bureau undertakes the study of special problems assigned to it, such as the periodic medical examination of the apparently healthy.

Each year, thousands of pamphlets on baby welfare, sex education, contagious diseases, cancer, school health problems and other subjects, are distributed.

LEGAL MEDICINE AND LEGISLATION

This Bureau keeps in touch with legislation and court decisions of interest to physicians, such as those relating to the prescribing and dispensing of liquor and narcotics, income and other taxes relating to the practice of medicine, quarantine laws, vaccination, medical

Wisconsin State Board of Health



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malpractice, protection of scientific research, etc. Information and experience collected by the Bureau is available to all Fellows and members of the Association through their respective state medical societies.

A. M. A. LIBRARY

The A. M. A. Library, while not pretentious, has very good facilities for rendering service to the profession. More than 300 medical journals, domestic and foreign, are regularly received, abstracted and indexed. These abstracts are available through the columns of The Journal A. M. A. A complete index of all articles currently published is arranged both by subject and author and furnished in the Quarterly Cumulative Index to Current Medical Literature. Any Fellow of the Association is entitled to use the facilities of the library and to call upon the library for a list of references on any medical subject of interest. Any foreign medical journal on file in the library can be borrowed for a reasonable length of time without charge. A package service has recently been established through which members can secure, for temporary use, original articles on a variety of subjects.

PUBLISHING DEPARTMENT

By developing its own printing plant, the Association is able to furnish medical publications at a great saving. This department includes extensive type equipment, linotype machines, flatbed and rotary presses and necessary bindery machinery for producing medical journals, books, pamphlets and supplies on a large scale, and at a reasonable cost. For example, the weekly issue of The Journal A. M. A. in one year make a total of more than 4,000 pages of reading matter attractively illustrated and well printed on good quality paper. The cost is but \$5.00, including Fellowship dues. Hygeia, the lay health journal, at \$3.00 per year, is printed on the Association's presses and compares in typography, illustrations and general attractiveness with other high grade magazines. The printing department also makes possible several special journals—"Archives of Internal Medicine," \$5.00 per year; "American Journal of Diseases of Children," \$4.00 per year; "Archives of Neurology and Psychiatry," \$8.00 per year; "Archives of Dermatology and Syphilology," \$8.00 per year; "Archives of Surgery," \$8.00 per year; "Archives of Otolaryngology," \$6.00 per year, and "Archives of Pathology and Laboratory Medicine," \$6.00 per year. Journals such as these necessarily have a limited appeal and would have to have a much higher subscription rate if printed by private concerns. This also applies to the Quarterly Cumulative Index to Current Medical Literature, which gives the user a reference to practically all worthwhile articles currently published in the world's medical journals, yet is furnished at a cost of \$8.00 per year.

The American Medical Directory is another publication made possible by the facilities of the Association. This is issued every two years. It is a book of about 2,500 pages and gives minute personal data on 95 per cent of the physicians in the United States and Canada and about 7,500 hospitals. It is furnished at a cost of \$15.00.

In addition to the regular periodicals issued by the Association, hundreds of thousands of circulars, reprints, leaflets, posters, etc., bearing on medical and health topics are printed and distributed annually.

COOPERATION WITH STATE AND COUNTY SOCIETIES

Through the office of its Secretary and through its Councils and Bureaus, the Association endeavors to keep in touch and to cooperate with state medical associations and county medical societies for the promotion of the welfare of the individual physician.

A. M. A. BULLETIN

The Bulletin goes each month, except July, August, and September, to all Fellows of the Association. Its columns are given over to the discussion of subjects pertaining to medical economics, medical organization and matters of general professional interest.

INFORMATION SERVICE

The bureaus and departments of the Association reply to many thousands of letters each year, answering requests for information in which physicians are interested. Thus the various offices of the Association constitute a veritable service bureau for the benefit of its members.

AUTOMOBILE INSIGNIA

The design on the cover of this issue of the Journal pictures the distinctive automobile emblem of the American Medical Association available to members only. The emblem originally used by the American Medical Association was limited in its sale to physicians, but it bore no distinctive marking and was found frequently in the hands of those not authorized to use it. The present emblem is protected in three ways: (1) by carrying a definite number, which is registered at the headquarters office of the American Medical Association; (2) by carrying the letters M.D., recognized everywhere as doctor of medicine, unmistakably the marking of a physician, and therefore definite proof of false pretense if carried on the car of any but a physician; (3) by copyright of the design, thereby making it possible for the American Medical Association to maintain complete control over the manufacture and distribution of the emblem.

The emblem can only be secured by addressing the Association. It is made in three types: the regular radiator style as shown on the cover, price \$1.50; combined with a temperature indicator—"The Signaphore," price \$8.50, price with lock cap, \$13.50, and the third style is the emblem with an outer ring on which is lettered the name of the local county society. This latter type emblem may only be secured in group orders of not less than fifty, price \$2.00 each.

CATALOGUE

A catalogue and price list of the publications of the Association may be had for the asking.

VISITORS WELCOME

Members and Fellows are urged to visit the offices of the Association and to look over its plant and its work.

CONCLUSION

Thus, in many ways, the Association is functioning in behalf of the individual physician. To take a full share in continuing and expanding its activities is the

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privilege of each physician who is a member, in good standing, of his county and state medical organizations. The annual dues for Fellows of the Association are \$5.00. This includes subscription to The Journal of

the American Medical Association and to the A. M. A. Bulletin. The subscribers to The Journal now total over 85,000 and of this number more than 58,000 physicians hold A. M. A. Fellowship cards.

Clinic Day for Physicians Features Annual Meeting of Wisconsin Anti-Tuberculosis Association

BY MRS. RUTH MACMILLAN

An innovation in the form of a preliminary meeting or clinic arranged especially for physicians interested in diseases of the chest, was the outstanding feature of the 18th annual convention of the Wisconsin Anti-Tuberculosis Association held in Milwaukee October 30th and 31st.

The clinic was conducted under the joint auspices of the Association and the Tuberculosis hospital of the National Soldiers' Home at the hospital on the day preceding the regular meeting, and was attended by approximately 50 physicians from various parts of the state. The interest manifested in the meeting may be gauged by the fact that a large proportion of the physicians attending the meeting were from up-state towns, many of them having come long distances for the one-day session. Major B. E. Hedding was host to the meeting and the visiting physicians were entertained at the hospital at luncheon.

Among the most interesting papers was one by Dr. Frederick J. Gaenslen, Milwaukee, on the diagnosis and treatment of bone tuberculosis in which he dealt very completely with tuberculosis of the spine, of the hip and to a lesser extent of other bones and joints. He gave a detailed discussion of the methods used in diagnosis, dwelling particularly on the value of early diagnosis of these lesions, together with the present methods of treatment. His lecture was illustrated.

Chest surgery, covering the fields of artificial pneumothorax, phrenotomy and thoracoplasty, was the subject of an address by Dr. C. A. Hedblom, Madison. He expressed the opinion that of these three procedures, artificial pneumothorax is preferable on condition that the air can be introduced into the pleural cavity. In the absence of adhesions, or when adhesions are slight, the pneumothorax will secure sufficient compression of the lung to give the desired result, namely, rest for the diseased organ. When the lung involvement is basal, phrenotomy often gives very satisfactory results and as the operation can be done under local anaesthesia and is practically free from danger, Dr. Hedblom feels that phreno-

tomomy will be used much more frequently in the future than in the past. It is followed by a reduction of from 200 to 500 c.c. in the capacity of that half of the chest cavity. Another advantage of phrenotomy is the fact that basal infections are assisted very materially in drainage by upward pressure of the diaphragm.

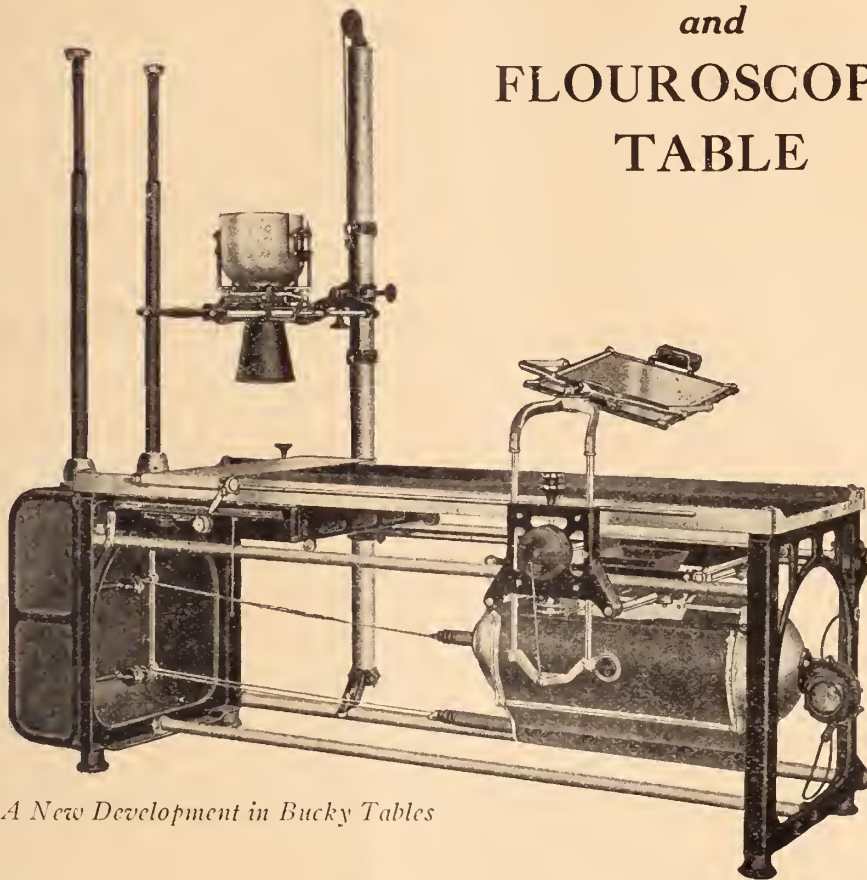
Thoracoplasty is giving results in a considerable number of cases where it was formerly thought the prognosis of the disease was hopeless. In most cases of thoracoplasty Dr. Hedblom advocates a previous phrenotomy on the ground that the compression of the lung is more complete after the diaphragm on the infected side has been paralyzed. In doing thoracoplasty the speaker advocated the three or four stage operation on the ground that the shock to the patient is less. Since performing this operation in three or four stages the death rate from the operation has been materially lowered. It is customary to remove portions of from nine to eleven ribs, including the first rib, in order that sufficient collapse of the chest wall may be had and adequate collapse of the lung from the apex to the base secured. As consulting surgeon to the Soldiers' Home, Dr. Hedblom was enabled to show a number of patients on whom he had done thoracoplasty.

Dr. Louis M. Warfield, Milwaukee, read a very interesting paper on Unusual Onset of Tuberculosis, giving special attention to patients who had been treated for gastric disturbances, neurasthenia, etc., when the primary disease was tuberculosis and the digestive or nervous symptoms were manifestations of toxemia due to the bacillus tuberculosis.

Other speakers were Dr. A. A. Pleyte, Wisconsin Anti-Tuberculosis Association, on Factors That Activate Tuberculosis; Dr. H. J. Kuhn, Veterans' Bureau, Milwaukee, on Heart Diseases; Dr. E. J. Kehoe, on Tuberculosis of the Bowel, Complicating Pulmonary Tuberculosis; and Drs. C. J. Kenney and E. J. Kehoe of the National Home, and Mr. Frank A. Reich, superintendent of Tomahawk Lake Camp for patients convales-

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cing from tuberculosis, on Hardening and Otherwise Preparing Patients for Life's Work.

So successful was the meeting felt to be by those who sponsored it, that similar meetings will probably become semi-annual affairs, held in connection with the annual meetings of the W. A. T. A. and other gatherings attended by physicians.

Immunity against tuberculosis in childhood was the subject of a very interesting paper given at the W. A. T. A. annual meeting by Dr. George Ernst, chief of the Milwaukee Health Department's tuberculosis division. Dr. Ernst believes that while every care should be taken to guard children from tuberculous infection, the important factor in tuberculosis prevention work is building up in the child, through sufficient rest, proper food and fresh air, a resistance through which the bacillus tuberculosis cannot break. The sources of infection are too numerous, declares Dr. Ernst, to guard against with any degree of certainty. Hence the importance of other means of protection.

"Milwaukee at the present time," declared the speaker, "has about 1,500 known cases of tuberculosis. Of these at the most 500 are segregated more or less, and 1,000 are at large. Some of these are well aware of their condition, but there are certainly many carriers of the tubercle bacillus who regard themselves healthy and yet the germs of tuberculosis can be found in their sputum. The course of tuberculosis is very slow so that months, perhaps years may pass without the person affected being very ill, and yet during the entire time he may be able to infect others, especially the immediate members of the family. It is not at all necessary that the condition of a carrier of the tubercle bacillus be manifest to his surroundings or to the public in general. For instance, we all know of old men or women who were troubled with a regularly recurring winter cough and a certain amount of weakness, not sufficient to cause them to live the life of an invalid and yet interfering with the pursuit of a regular occupation. Such people are often delegated to take charge of their grandchildren while the sons and daughters pursue their way of making a living. Nobody pays attention to their coughing nor to the slight weakness, since that is a natural accompaniment of advancing years; yet not infrequently these old people harbor tubercle bacilli in their sputum. As a proof of this I may state that the inmates of an almshouse have been examined

with this object in view and 25 per cent of them were found to be tuberculous and able to infect others.

"Reviewing the possibilities of infection, we need not be surprised that the largest number of school children are passing or have passed through an attack of tuberculosis. Of course, being infected with the tubercle bacillus does not mean that these children all have active tuberculosis. The virulency of the infecting organism is usually not sufficiently high that it may not be neutralized by the anti-bodies in the system of the child. Within a shorter or a longer period of time the organisms are walled off, usually in the lung, and are now no more active.

"The result of this early infection is by no means always harmful. On the contrary it often produces a relative immunity in human individuals against subsequent infections, which we know are unavoidable. While the immunity produced by the tubercle bacillus is not nearly as absolute as that of other infectious diseases, it is usually sufficiently potent to prevent the development of active tuberculosis.

"The bacilli that have invaded the body preceding an early attack are hence both a source of immunity and of danger. The determining factor whether they will be beneficial or harmful is the constitution, in its widest meaning, of the individual. Ever after the first invasion of the tubercle bacillus into the human system there will persist throughout life a continuous fight between the germs deposited in the body and its vitality."

RULES ON PRACTICE ACT

A physician located in an adjoining state, whose territory for practice requires him to practice medicine in Wisconsin, must secure a Wisconsin license according to an opinion by Attorney General Herman L. Ekern, released during November.

In a second opinion to Dr. Robert E. Flynn, secretary of the State Board of Medical Examiners, the Attorney General held that persons employed in state institutions or as assistants, or as locum tenens, must be licensed to practice medicine if the nature of their work is such that they hold themselves out as authorized to practice medicine, surgery, or osteopathy, or any other system of treating bodily or mental ailments.

Because of the importance of the two decisions, they are reprinted in full herewith:

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The first period starts at 8:00 Monday Evening, January 18th. This first lecture is free to all who wish to attend. To those Physicians who have already taken either lecture course or the clinical demonstration work, this course is open at half the fee, which is \$17.50, otherwise the fee is \$35.00.

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- (2) Must a physician employed as a *locum tenens* be licensed?
- (3) Must a physician employed in our state institutions, either charitable, educational or penal, be licensed?

Sec. 147.02(1) provides:

"No person shall practice or attempt or hold himself out as authorized to practice medicine, surgery, or osteopathy, or any other system of treating bodily or mental ailments or injuries of human beings, without a license or certificate of registration from the state board of medical examiners, except as otherwise specifically provided by statute, nor unless he shall record the same with the county clerk of the county in which he shall practice and pay a fee of fifty cents for each recording. * * *"

The answer to your first question would appear to depend to a large extent upon the facts in each particular case. If the assistant does in fact hold himself out as licensed to practice medicine, surgery or osteopathy, or any other system of treating bodily or mental ailments or injuries of human beings, then he is violating the statute, regardless of whether or not he uses the term "assistant." If he does in fact treat bodily or mental ailments or injuries of human beings, then I believe that he is holding himself out as authorized to practice within the meaning of the statutory provision. If, on the other hand, he merely assists the licensed practitioner without himself treating ailments or injuries, then I am of the opinion that a license or certificate would not be required.

Considering now your second question, I find that *locum tenens* is defined as "a substitute or deputy, one filling an office for a time." The situation you have in mind, as I understand it, is where the regular practitioner leaves his practice for a time and a substitute is employed to take care of it during the regular practitioner's absence. Such a person, it would appear, clearly holds himself out as authorized to practice within the meaning of the statute, and I am, therefore, of the opinion that he should be licensed.

The answer to your third question appears clear, in view of the foregoing discussion. If the physicians employed in the state institutions actually do the regular work of physicians in treating mental and bodily ailments, they are holding themselves out as authorized to practice within the meaning of the statutes and should, therefore, be licensed.

Very truly yours,
C. A. Erikson,
Deputy Attorney General.

CAE:LF

Approved:

Herman L. Ekern, Attorney General.

Caption:

Persons employed in state institutions or as assistants or locum tenens should be licensed to practice medicine if the nature of their work is such that they hold themselves out as authorized to practice medicine, surgery or osteopathy or any other system of treating bodily or mental ailments.

PUBLIC HEALTH NOTES
FROM THE
STATE BOARD OF HEALTH

A health officer was advised that desquamation, or peeling of the skin, in scarlet fever is a condition that applies to the feet as well as to other parts of the body, and that until peeling is complete a child must be kept out of school.

Where expense is incurred in disinfecting a schoolhouse after a communicable disease, the town, village or city, and not the school district, is responsible for the payment. It was explained that under this rule a hardship may sometimes be created by reason of the presence of students from other districts, but that repeated attempts to get the legislature to change the law by making the school district the unit in bearing such expense have been defeated. Under the present law, in the case in question, it is the duty of the village to provide for the disinfection of the school building upon the order of the school board.

Inquiry came as to the effectiveness of chlorine gas as a preventive and curative agent for colds. It was advised that the U. S. Public Health Service has conducted extensive experiments in this line and that the results to date have not been entirely satisfactory.

Two automobiles collide and one passenger dies within a few hours; another having a weak heart could not survive the shock. Would this be considered a coroner's case? The board replied: "It is not possible, neither do we consider it necessary, to hold a coroner's inquest in a case of death resulting from heart failure due to automobile accidents. If there is no evidence of foul play, the district attorney usually refuses to permit the holding of an inquest. The coroner is not permitted to enter the cause of death except in cases where an inquest is held."

amp. 1-7.

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THE BASIC SCIENCE BILL PASSES

With but five dissenting votes in the one hundred and thirty-three, our Wisconsin Legislature has passed the Moul-Boldt Basic Science Bill, 27A. (See page 45.) The bill now awaits the approval of the Governor.

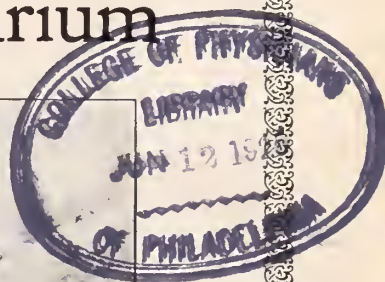
This piece of basic public health legislation is the third of consequence in the history of the State Medical Society of Wisconsin. The first was the measure for a State Board of Health passed in 1876, and the second was the bill for our first Medical Practice Act which became a law in 1897.

We are happy over this latest success because it represents a service to the people of this commonwealth. It is a group service to which members in every county of this state contributed their share.

Table of Contents, page IV

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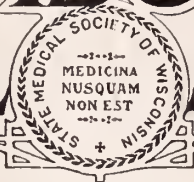
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THESE WILL INTEREST YOU

Announcement of preliminary plans for the 79th Annual Meeting—
page 101.

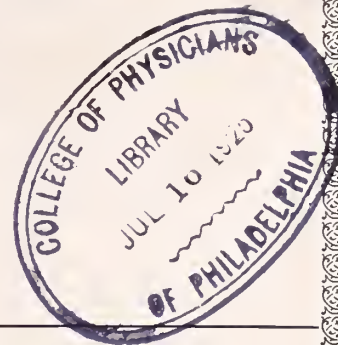
What the Senate thought of a substitute bill—page 103.

How the new single permit law reads—page 109.

What physicians on the Clinic Tour have seen—page 102.

The best way to see the country—page XXII.

Table of Contents page IV



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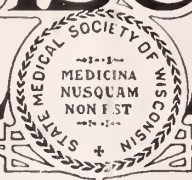
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To the Medical Profession of Wisconsin

Plan now to be in Milwaukee September 16th, 17th, and 18th for the seventy-ninth annual meeting of the State Medical Society of Wisconsin. Your program committee has made an untiring effort to have the coming meeting our best. To progress we must surpass. It devolves upon you, as practitioners of this state, to attend the meetings of your state society for your own enlightenment, for the benefit of your patients, and for our group progress.

This is your society, for the success of which you are morally and professionally obligated. Come, that you may relax for three days from your usual routine, that you may extend and deepen your friendships, and that you may "do your bit" in moulding the medical opinion of this great commonwealth—WISCONSIN.

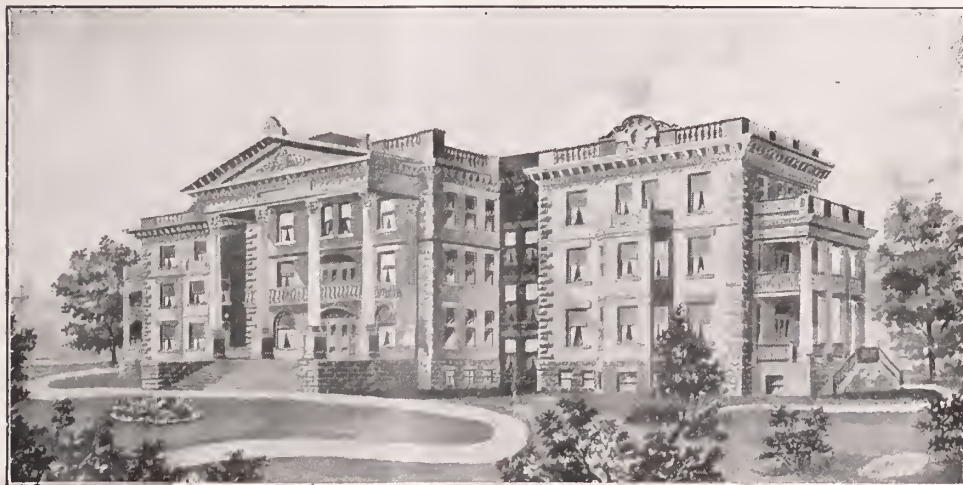
Wilson Cunningham.

President, State Medical Society of Wisconsin.

Table of Contents, page IV

Waukesha Springs Sanitarium

FOR NERVOUS DISEASES



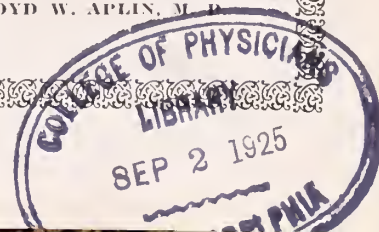
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UNUSUAL PROGRAM FOR WISCONSIN STATE MEETING

(Journal of the American Medical Association)

Secretaries of state and other medical societies who are constantly confronted with the dilemma of arranging unusual features for programs will, no doubt, find much inspiration in the program of the Wisconsin State Medical Society for its September session. Apparently, the program committee has given an unusual amount of consideration to the plans for this session. The committee determined to plan the entire program along a single line with definite relationship to fundamental problems in medicine studied from a biologic point of view. In the preliminary announcement, a general introduction outlines briefly our present knowledge of the biology of the individual cell with particular relation to irritation, disease, stimulation and fatigue. The proposition is established that the laws governing cell growth are definite. The program of the first day consists of addresses by well known authorities on general biologic considerations, including the biologic aspects of immunity, pathology, ductless glands, heat and exercise, and light and food. In the next session, other contributors to the program take up the practical application of various methods in the treatment of disease based on biologic laws. The session of the next morning is concerned largely with the blood, and other sessions follow, devoted to constitutional disorders and the application of radiotherapy and roentgen-ray diagnosis. Each of the daily programs is introduced by a statement explaining the nature of its conception, and each of those on the program has been asked to provide a competent abstract, so that members will be capable of contributing intelligently to the discussions. The careful planning and original thought given to the development of this program should be an inspiration to those responsible for arrangement of medical sessions. Undoubtedly, the success of the meeting will more than repay the committee for its work.

Table of Contents, page IV

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IN THIS ISSUE

Present Status of Radiotherapy of Malignancies
H. R. Foerster

Cataract Operation by Suction, the Barraquer Method
Samuel G. Higgins

Other Original Articles by
B. H. Schlomovitz et al, Anne Fitzgerald, L. W. Hipke and Robert Sonnenschein

The Need of Vision in Medical Teaching and Other Editorials

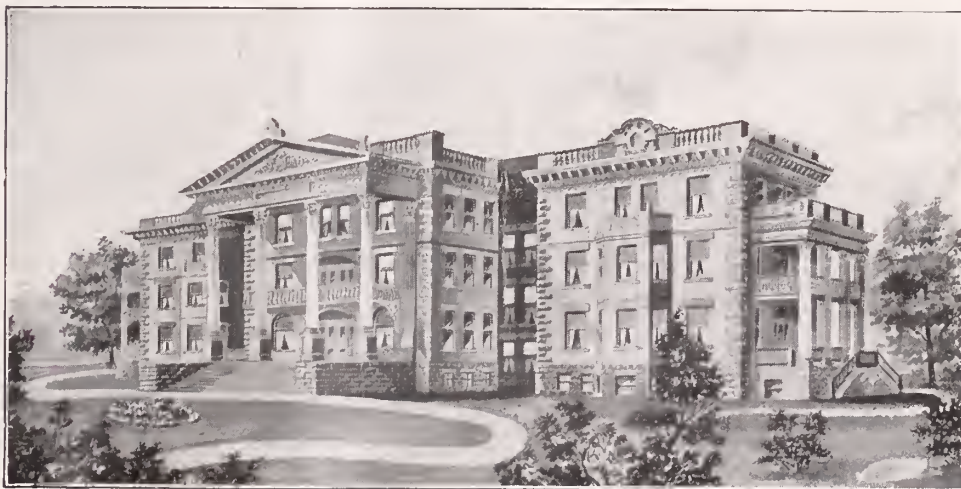
News of the 79th Annual Meeting

Hospitals in Wisconsin, the Concluding Chapter
Dean Charles R. Bardeen

Table of Contents, page IV

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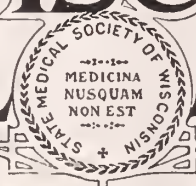
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DESERVING OF SPECIAL ATTENTION

Few issues of this Journal have contained so many articles deserving of special attention as does this, your November Journal. Included in the Original Articles will be found the first of the papers read at the 79th Annual Meeting.

In the Preventive Medicine Section, page 323, our readers will find an intensely interesting and instructive article on "How Milwaukee Aborted Its Smallpox Epidemic."

Again, we call your attention to "Policies of the State Board of Health," page 335; "Some Problems of the Medical Profession," page 340, and "Obtain Maximum Results from a Health Magazine" on page 344.

Table of Contents, page IV

Waukesha Springs Sanitarium

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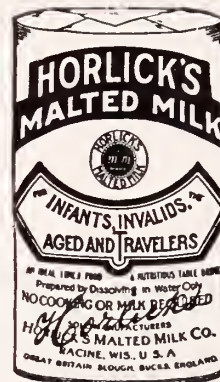
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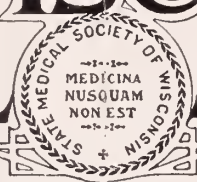
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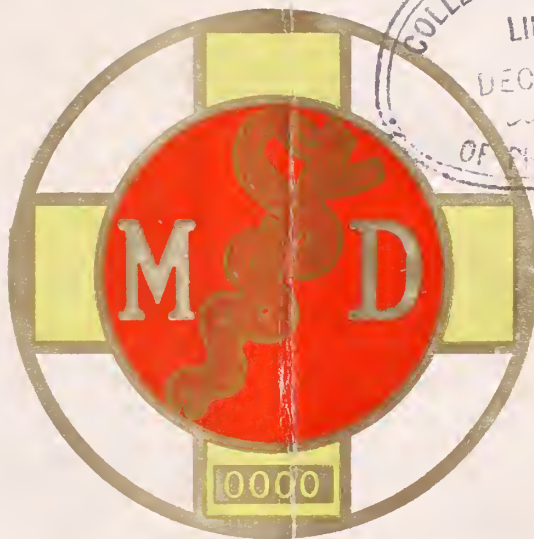
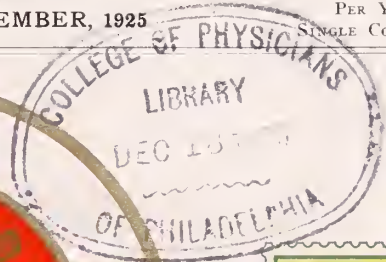


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TABLE OF CONTENTS
Page IV

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