

THE QUARTERLY JOURNAL

OF

INEBRIETY.

PUBLISHED UNDER THE AUSPICES OF THE AMERICAN ASSOCIATION FOR THE STUDY AND CURE OF INEBRIATES.

T. D. CROTHERS, M. D., Editor.

56 FAIRFIELD AVENUE,

HARTFORD, CONN.

Vol. XXI.

JANUARY, 1899.

No. 1

HARTFORD, CONN.

THE CASE, LOCKWOOD & BRAINARD CO.
PRINTERS.

EUROPEAN AGENCY:

BAILLIERE, TINDALL & COX
20 KING WILLIAM STREET, ON THE STRAND, LONDON, W. C.

Subscription \$2.00 Per Year.

TABLE OF CONTENTS.

JANUARY, 1899.

	Page
DR. ISAAC N. QUIMBY. DR. THOMAS D. CROTHERS,.....	1
DEGENERACY. DR. EUGENE S. TALBOT,.....	10
EFFECT OF ALCOHOL ON MUSCULAR WORK. DR. E. DESTREE,	22
CONTINUED IN INEBRIETY. DR. T. D. CROTHERS,.....	39
ARTICLES AND REVIEWS:	
MEGALOMANIA,.....	50
INEBRIETY IN WOMEN,.....	59
THE MORPHINE HABIT,.....	60
ACUTE CHLORAL DEMENTIA SIMULATING PARETIC DEMENTIA,.....	64
MORPHINE CRYSTALS IN THE BLOOD,.....	67
HEREDITY AS A CAUSE OF ALCOHOLISM,.....	69
STRYCHNINE,.....	71
INEBRIETY FROM TRAUMATISM,.....	75
NOTES ON SOME ANATOMIC CHANGES IN BRAIN CELLS, ETC.,.....	77
POISONING FROM WOOD ALCOHOL,.....	78
ALCOHOLIC SOMNAMBULISM,.....	79
CAUSES OF SUDDEN DEATH FROM ALCOHOLISM,.....	81
EDITORIAL:	
THE JOURNAL OF INEBRIETY FOR 1899,.....	93
MORPHINISM AND CRIME,.....	94
SOME SIGNIFICANT FACTS,.....	97
STUDY OF INEBRIETY,.....	99
SEVENTH INTERNATIONAL CONGRESS,.....	101
CLINICAL NOTES AND COMMENTS,.....	105

LISTERINE. THE STANDARD ANTISEPTIC

LISTERINE is to make and maintain surgical cleanliness in the antiseptic and prophylactic treatment and care of all parts of the human body.

LISTERINE is of accurately determined and uniform antiseptic power, and of positive originality.

**LAMBERT'S
LITHIATED
HYDRANGEA.**

A valuable Renal Alterative and Anti-Lithic agent of marked service in the treatment of Cystitis, Gout, Rheumatism, and Diseases of the Uric Diathesis generally.

DESCRIPTIVE LITERATURE UPON APPLICATION.

LAMBERT PHARMACAL CO., ST. LOUIS.

WHEN several hundred medical men have tested a remedy, and found it good, there is a temptation to try it. But when thousands of medical men all over the world have tried and tested a preparation like Aletris Cordial in the diseases in which it is recommended, viz.: Amenorrhea, Dysmenorrhea, Leucorrhea, Prolapsus Uteri, Sterility, to prevent Miscarriage, etc., and have given the most brilliant reports as to its value, it seems as though physicians who have cases of this kind would have an irresistible desire to at least test it.

Sample sent to any Physician who will pay express charges.

Rio Chemical Co.,
ST. LOUIS, LONDON, PARIS, MONTREAL.



BEWARE OF WORTHLESS IMITATIONS.

ECTHOL, NEITHER
ALTERATIVE NOR ANTISEPTIC
IN THE SENSE IN WHICH THOSE
WORDS ARE USUALLY UNDER-
STOOD. IT IS ANTI-PURULENT,
ANTI-MORBIFIC--A CORRECTOR
OF THE DEPRAVED CONDITION
OF THE FLUIDS AND TISSUES.

SAMPLE (12-oz.) BOTTLE SENT FREE ON RECEIPT OF 25 CTS.

FORMULA:--Active principles
of Echinacia and Thuja.

BROMIDIA
IODIA
PAPINE

BATTLE & CO., CHEMISTS
CORPORATION, ST. LOUIS, MO., U. S. A.

Private Home for Female Inebriates.

Dr. AGNES SPARKS receives at her residence,

140 So. Portland Ave., Brooklyn,

a limited number of women ill from **ALCOHOLISM**, to whom she
devotes her special professional attention.

REFERENCES.

Dr. J. B. MATTISON.

Dr. ALEX. J. C. SKENE.

RICKINE

DEAR DOCTOR :

We have been made the custodian of a valuable formula — a veritable physician's friend — upon the condition that we would supply it *only* to physicians. We have accepted the trust, and beg to call your attention to it.

As a reliever of pain, having its origin in nerve disturbances, whether by cardiac action or otherwise, it is without a rival. Its action in all forms of Headache, Hemicrania, Neuralgia, etc., is satisfactory both to the patient and physician. It is the

PHYSICIAN'S FRIEND,

in that by use the administration of the products or alkaloids of opium can be somewhat abbreviated, which, to many, "is a consummation devoutly to be wished."

It is invaluable as a remedial agent for the control of the temperature of the human body. Experience demonstrates that it causes no gastric disturbances.

This valuable remedy can only be obtained direct from us, *by physicians only*, and as we anticipate a constant and increasing demand for it send in your order at *once*, so that there may be as little delay as possible in your receiving it.

The dose of **Rickine** is from five to ten grains, repeated in an hour if the desired effect is not obtained from the first dose. As high as sixty grains may be administered during the twenty-four hours to an adult.

Rickine is prepared in powder form, as well as in 5-grain tablets, and is packed in tin boxes, each containing one ounce (either form) and cannot be obtained in any other way.

There has been a demand for the following formulas, which we are now making:

Rickine and Codeine,	Rx. Rickine	4 3-4 grs.
	Codeine	1-4 gr.
Rickine and Quinine,	Rx. Rickine	3 grs.
	Quinine	2 grs.
Rickine and Salol,	Rx. Rickine	3 grs.
	Salol	2 grs.

Prices same as **Rickine**: 65c. per oz. or an assorted order of ten ozs. \$5.75.

MANUFACTURED ONLY BY

THE G. F. HARVEY CO.

SARATOGA SPRINGS, - - - - NEW YORK.



In La Grippe

behaves as a stimulant as well as an **Antipyretic**

and **Analgesic** thus differing from other Coal-

tar products. It has been used in the relief of rheumatism and neuralgic pains, and in the treatment of the sequela of alcoholic excess. **AMMONOL** is also prepared in the form of salicylate, bromide, and lithiate. The presence of Ammonia, in a more or less free state, gives it additional properties as an expectorant, diuretic, and corrective of hyperacidity.— *London Lancet*.

The Stimulant

AMMONOL is one of the derivatives of Coal-tar, and differs from the numerous similar products in that it contains Ammonia in active form. As a result of this, **AMMONOL** possesses marked stimulating and expectorant properties. The well-known cardiac depression induced by other Antipyretics has frequently prohibited their use in otherwise suitable cases. The introduction of a similar drug, possessed of stimulating properties, is an event of much importance. **AMMONOL** possesses marked anti-neuralgic properties, and it is claimed to be especially useful in cases of dysmenorrhœa.— *The Medical Magazine, London*.

Ammonol may be
obtained from all
Leading Druggists.

The Ammonol Chemical Co.,

NEW YORK, U. S. A.

Send for "Ammonol
Excerpta," an 81-page
pamphlet.

WHEELER'S TISSUE PHOSPHATES.

Wheeler's Compound Elixir of Phosphates and Calisaya. A Nerve Food and Nutritive Tonic for the treatment of Consumption, Bronchitis, Scrofula, and all forms of Nervous Debility. This elegant preparation combines in an agreeable Aromatic Cordial in the form of a Glycerite, *acceptable to the most irritable conditions of the stomach.* Bone Calcium Phosphate, Ca_2PO_4 ; Sodium Phosphate, Na_2HPO_4 ; Ferrous Phosphate, Fe_2PO_4 ; Trihydrogen Phosphate, H_3PO_4 ; and the Active Principles of Calisaya and Wild Cherry.

The special indication of this combination of Phosphates in Spinal Affections, Caries, Necrosis, Ununited Fractures, Marasmus, Poorly Developed Children, Retarded Dentition, Alcohol, Opium, Tobacco Habits, Gestation and Lactation, to promote Development, etc., and as a *physiological restorative* in Sexual Debility, and all used-up conditions of the Nervous System, should receive the careful attention of good therapeutists.

NOTABLE PROPERTIES. — As reliable in Dyspepsia as Quinine in Ague. Secures the largest percentage of benefit in Consumption and all Wasting Diseases, *by determining the perfect digestion and assimilation of food.* When using it, Cod-Liver Oil may be taken without repugnance. It renders success possible in treating chronic diseases of Women and Children, who take it with pleasure for prolonged periods, a factor essential to maintain the good-will of the patient. Being a Tissue Constructive, it is the best *general utility compound* for Tonic Restorative purposes we have, no mischievous effects resulting from exhibiting it in any possible morbid condition of the system.

Phosphates being a **NATURAL FOOD PRODUCT**, no substitute will do their work in the organism.

Dose. — For an adult, one tablespoonful three times a day, after eating: from seven to twelve years of age, one dessertspoonful; from two to seven, one teaspoonful; for infants, from five to twenty drops, according to age.

Prepared at the Chemical Laboratory of

T. B. WHEELER, M.D., Montreal, P. Q.

To prevent substitution, put up in pound bottles only, and sold by all Druggists at One Dollar.

Read the pamphlet on this subject sent you.

Scientific American
Agency for

PATENTS

CAVEATS,
TRADE MARKS,
DESIGN PATENTS,
COPYRIGHTS, etc.

For information and free Handbook write to
MUNN & CO., 361 BROADWAY, NEW YORK.
Oldest bureau for securing patents in America.
Every patent taken out by us is brought before
the public by a notice given free of charge in the

Scientific American

Largest circulation of any scientific paper in the
world. Splendidly illustrated. No intelligent
man should be without it. Weekly, \$3.00 a
year; \$1.50 six months. Address, MUNN & CO.,
PUBLISHERS, 361 Broadway, New York City.

“An Ideal Digestive Food.”

Distinguished chemists and eminent clinicians unite in declaring that Maltzyme with Cod Liver Oil is “an ideal digestive food.”

All of the virtues of the best cod liver oil are combined with those of the diastasic nutrient Maltzyme.

Maltzyme with Cod Liver Oil contains twice as much diastase as any other malt with oil.

Maltzyme with Cod Liver Oil, has no rival in point of palatability and digestibility.

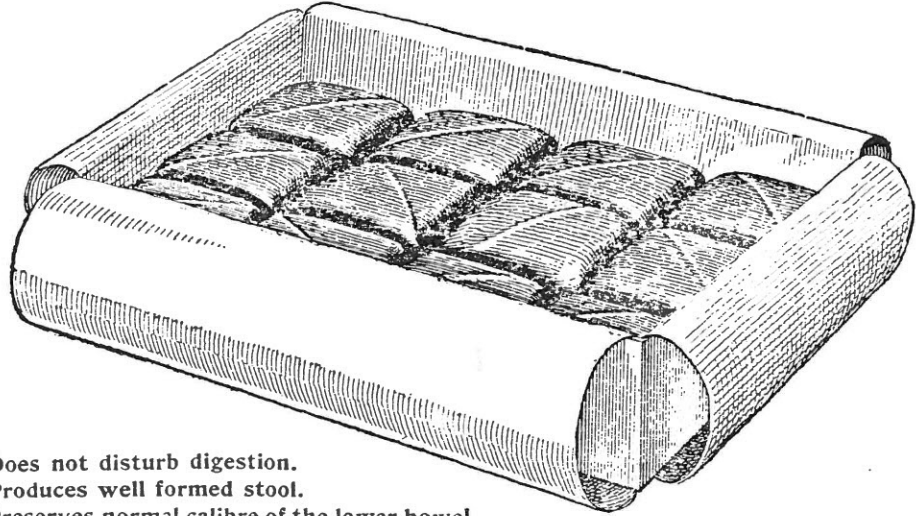
The Profession has had to be contented in past years with certain crude, thick, gummy malt products which, though of undoubted value, represent processes now happily improved upon.

In addition to Maltzyme with Cod Liver Oil we make Maltzyme (plain), Maltzyme with Cascara Sagrada, and Maltzyme with Hypophosphites.

May we send you our pamphlet and discuss the question of samples with you?

MALT-DIASTASE CO.,
No. 1 Madison Ave., New York.

“ FIKULAX ” (Ficus Chocolatis Laxans) is presented as a laxative which causes a gentle, alvine evacuation without irritation. Most valuable in habitual constipation. FIKULAX is delightful in taste and attractive in appearance, important attributes in a medicament to be administered to women and children.

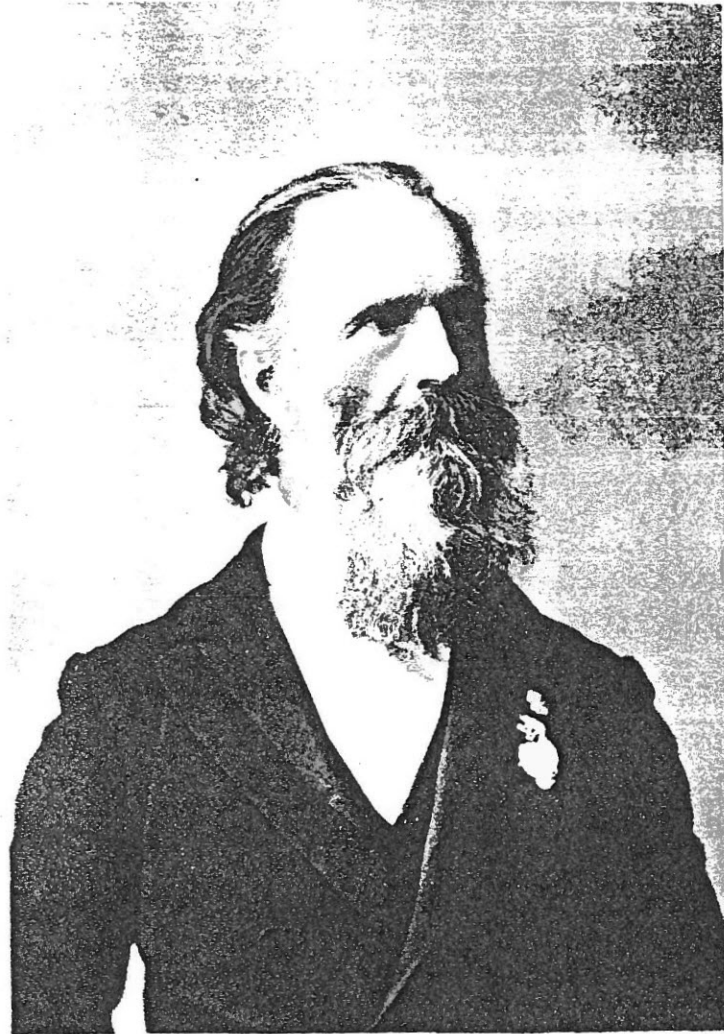


Does not disturb digestion.
 Produces well formed stool.
 Preserves normal calibre of the lower bowel.

CHAS. ROOME PARMELE CO., 36 PLATT STREET, NEW YORK.

NOVARIAN CONGESTION, HYSTERALGIA, DYSMENORRHOEA ETC.
 Crush—Take with water or whisky.

ANTHAXIA and CODEINE TABLETS
 (2 grs. Anthraxia & 5 grs. Codeine)
 LARYNGEAL NEUROSES, BRONCHIAL AFFECTIONS
 PHTHISICAL COUGH and GRIPPEAL CONDITIONS
 Slowly dissolve tablet upon the tongue.



ISAAC N. QUMBY, M. D.

THE
QUARTERLY JOURNAL OF INEBRIETY

Subscription, \$2.00 per year.

Vol. XXI. JANUARY, 1899. No. 1.

This Journal will not be responsible for the opinions of contributors, unless
indorsed by the Association.

THE LATE DR. ISAAC N. QUIMBY.

Biographical Sketch.

By T. D. CROTHERS, M.D., HARTFORD, CONN.

The pioneers in a new field of research are always distinctive for a certain vigilant self-reliant cast of character. Like explorers, the difficulties and obstacles which they encounter give renewed impetus to their work. When theories, heavy with age and intense prejudices fostered and grown through many generations, oppose every effort, the true pioneer becomes more resolute, and the faith of his convictions more intense. Such men are picturesque in earnestness and impetuosity. They stand out alone with a certain halo and glamor of superiority which is unmistakable. Dr. Quimby was a pioneer of this class. He early moved out of the field of mediocrity and current theories of the present, and started up the road to clear away the dense ignorance and mark out lines and paths for the coming generations. The story of his life and work can only be outlined at present. Isaac N. Quimby was born at Bernardville, N. J., in 1831. His father was Nicholas Emmons Quimby, a farmer, and great

grandson of Judge Emmons, a judge in the Supreme Court of New Jersey. His mother was Rachel Stout, from an old New Jersey family. Both his grandparents were patriotic soldiers in the Revolutionary War. His father also served in the War of 1812. Dr. Quimby lost both parents, and early in life learned to depend on his own resources. Beginning on the farm, he learned the trade of a miller, and when nineteen years of age went to Zanesville, Ohio. Here, through the influence of Dr. Barr, he determined to become a physician. After a preparatory course at Chester Collegiate Institute, New Jersey, in which he ranked very high as a student, he prepared to take up medicine. In 1856 he entered the University Medical College of New York and graduated, second in his class, with a special certificate of honor, in 1859. Upon the breaking out of the Rebellion, Dr. Quimby entered the army as a volunteer surgeon; served with General McClellan's forces in the swamps of the Chickahominy, in the Seven-days Battle, and "change of base" to the James River and the retreat to Harrison's Landing; was at Antietam and remained with his division until after the battles of the Wilderness, when, on account of illness, he returned home, and shortly after resumed the practice of medicine, in which he continued up to death.

Dr. Quimby was lecturer in the spring course of the University Medical College, New York, 1866-68, and also assistant to Professor A. C. Post in his surgical clinic at the same institution. He was the originator of the Hudson County, now Christ's, Hospital in 1868, and was surgeon to the same until 1873. He was also one of the attending surgeons of the City Hospital, Jersey City.

Dr. Quimby was a member of the American Medical Association, and of its judicial council; also one of the founders and the first chairman of the section of Medical Jurisprudence of that association; was a member of the Hudson County District Medical Society; of the American Public Health Association; of the Medico-Legal Society of New York; of the New York

Society of Jurisprudence and State Medicine; of the Mississippi Valley Medical Association; honorary member of the Gynecological Society of Boston; of the British Medical Association; of the American Association for the Cure of Inebriety, and vice-president of this Association at the time of his death; also a delegate from the American Medical Association to the International Medical Congress, London, 1881, and again in 1884, in Copenhagen, and again in 1894 at Rome, Italy. He was a member of the first Pan-American Medical Congress, which met at Washington, D. C., in September, 1893.

Dr. Quimby devised several important improvements in surgical operations: "A New Mode of Treatment of Congenital Talipes," Transactions of the American Medical Association, Vol. XIX; "A New Method of Amputation of the Ankle-Joint," *ibid.*, Vol. XXI; "A Case of Compound Fracture of the Tibia and Fibula," and operation on parallel bones by which the amputation of a limb may be avoided, *ibid.*, 1879; "The Criminal Use of Chloroform," an original investigation which grew out of his work as an expert in the Smith-Bennett trial in Jersey City, *ibid.*, Vol. XXXI. Dr. Quimby was one of the founders of the American Medical Temperance Association in 1891, vice-president up to death, and delivered an address before the World's Temperance Congress at Chicago in 1893. He also wrote a paper on the "Pathological Action of Alcohol in Health and Disease," read before the New Jersey Temperance Alliance, printed by that society in a pamphlet edition of five thousand copies, and circulated throughout the state. He was nominated for governor by the Prohibitionists of New Jersey in 1883, but declined the honor.

Married, first, in 1863, Miss Helen Stark, daughter of the late Thomas McKie, a retired merchant of New York city. Of their children, one, Alfred Charles Post Quimby, survives his mother, who died in 1868. Dr. Quimby married, second, in 1875, Miss Frances H., daughter of the late James Flem-

ming of Jersey City. They have one son, Isaac Newton Quimby, Jr.

This is a mere outline of his life work as seen from a distance. Farther back, some of the conditions which entered into his inner life and its activities may be traced.

First of all, Dr. Quimby was naturally a joyous optimist. The bright colors and joyous movements of events in life had more attraction than shadows and the background of sorrows. All through life this sunny disposition never lost its brightness, but constantly attracted a large class of sorrow-stricken men and women, who continually gathered around him for counsel, advice, and help, in all times of trouble. This led him to continually carry round the burdens of others and be the center of a storm circle which he was ever guiding and directing. His very clear conviction of the danger from alcohol brought to him another still more depressing class of patients, who at all times and at all places begged for counsel and advice on the saddest of all misfortunes. His clear views of human motives and conduct gave him a pathetic cast of thought on business matters, and this brought him another equally exacting crowd who sought for the same counsel and advice. To these different classes of persons he was the same positive, emphatic, sunny man, always prodigal of his strength and energy, and always ready to give his time and sympathy to any cause. Dr. Quimby was literally a soldier always on duty with his drawn sword in his hand ready at any moment to challenge wrong and defend the right. He was never caught sleeping or was indifferent to the consequences of acts or events. There was a certain chivalric alertness that characterized all his conduct, and even when he was in error his earnestness was contagious, and it was remarkable how he could produce conviction on the minds of his followers. His work as a temperance reformer will be of most interest. This began thirty years ago, and was based on solid convictions of right and duty which grew and widened as the years went on. Total abstinence was no theory to him; it was a solid fact which every year's experience

enlarged. He had no bitter personal experience, but his observations in his daily rounds of practice brought convictions which he realized in all their suggestive meanings. From this he was ever a student of the problem of what to do with the inebriate, and how to prevent the use of alcohol as a beverage, and to teach the actual facts and the nature of the action of alcohol. While he was keenly sensible of the honor of leading the party of prohibitionists in the state campaign, he saw that his influence would be greater along other lines of work. In company with others he fully recognized that no condemnation of alcohol could exceed the facts and no charge of extravagant language concerning alcohol and its effects would bear the slightest test. He saw with a clear prophetic vision that the battles against alcohol and its settled delusions could only be won by a long progressive siege. A systematic marshaling of forces and persistent bombardment with facts, statistics, and new views revealing the errors and mistakes of the nature and effects of alcohol. Like a general who has mastered the facts fully and knows the position and resources of the enemy, he gathered and concentrated his forces along lines where its effect would be most powerful. For many years he accepted invitations to speak before churches and societies on the injury from alcohol as a beverage and against promiscuous medicinal use. He enjoyed these meetings and often spoke of the pleasure it gave him to correct the errors of others. A clergyman was so much impressed with his remarks that he finally left the church and is now one of the most influential platform speakers on temperance in this country. Dr. Quimby's work on Mrs. Hunt's advisory board was very pleasing to him, and gave him a wider opportunity to help on a siege train in the great conflict. He realized the tremendous power of this work, and had he lived would have rendered most important services in this field. He joined most enthusiastically in the effort to rouse a scientific sentiment among the leaders of the medical profession concerning alcohol and break up the delusive conservatism which accepts the theories of the

past without challenge or question. He had both the boldness of Luther and the firmness of Knox in asserting and defending his convictions in medical meetings. He was impetuous and revolutionary when opposed by medical men in public debate, and carried his conviction by storm, dividing the convictions of his hearers into two opposing camps. Dr. Quimby also gathered around him a warm following, men who believed implicitly in his conceptions, and at the same time he fused the opposition, and concentrated them into a distinct body who doubted and distrusted his reasoning. Such persons had no personal feelings and always manifested warm interest in his genial personality while condemning his opinions. In all this his prodigality of energy, diffusive and concentrative, on small as well as large matters, was a sore mistake. He wore out before his natural time. A slower pace with more rest and change would have given him a longer life and fuller opportunity for working out the great problems.

At this time I can only stop to recall that a really great man has been with us and gone. We saw him too near to secure a proper prospective of his mental magnitude. Our feeble vision caught sight of his power, but his limitation and weakness obscured all the rest. Now that he has passed away and we stop to see what he has done, a new impression comes to us. We look about to see if some one is not ready to fill the gap he left, and are startled that he can have no followers to fill the place he occupied. The ranks will fill up with other men, but no one will take his place. While the dreary slow battle goes on, and the noise and smoke of the conflict fills all the air, we shall miss the ringing clarion tones of Dr. Quimby. But his spirit, which comprehended the great impending conflict, is with us yet.

Dr. Quimby will be remembered as a man of intense activity, who mastered details readily, and, like General Sherman, wanted to know all the details personally before deciding. His home life was a practical university to which he invited

and entertained professional men and reformers and students of all classes, who in turn felt free to discuss all the various topics they were familiar with. It was from this circle of intense mental activity that he drew inspiration and force for his daily duties.

While it is too early to judge of the results of Dr. Quimby's life work, there is unmistakable evidence that our knowledge of the delusions of alcohol have been immensely advanced by his work. The general subject has been widened and pressed home in many ways, and conviction and conversion has followed along new and unexpected lines. On many occasions I have noted this in small companies of physicians and in individuals who were startled at the personal setting of the facts which Dr. Quimby gave. This to me was one of the signs of his greatness. It was earnestness, intense and contagious, living and consuming in its zeal. This is the real secret of all progress in this work. The great reformers, martyrs, and pioneers of every advance of civilization have been terribly in earnest. All growth along evolutionary lines has been of this character. Dr. Quimby's temperance convictions and facts concerning alcohol were burning truths that called for vivid expressions and could not be expressed in drowsy, sleepy sentences.

For ourselves, the battle is going on: the work Dr. Quimby left we must take up. While the end is not in sight, the obstacles to be overcome and the obstructions to be removed are threatening and formidable. The saloons will disappear, all forms of alcohol as beverages are doomed, and will pass away among the great delusions of this childhood age of our race. Dr. Quimby realized that progress was not alone dependent on weak human efforts; that the real temperance cause was a great evolutionary movement of the race; that all our reform efforts were forming in line and marching to the orders of unseen commanders who direct and shape the results. Our friends and co-workers die and yet the movement goes on, and we ourselves will disappear by and by and other persons will

fill up the ranks, and yet there is a consciousness that all our efforts are parts of a great evolutionary struggle upwards.

Dr. Quimby was vice-president of the Association for the Study and Cure of Inebriety, and took a lively interest in all its meetings. He had some very practical ideas of treatment which he tested fully in his hospital work, and often applied in private practice with good results. He was most emphatic in his convictions of the need of asylum care of inebriates, and often urged the hospital plan of treatment by the authorities, in public meetings. He urged that until the dangerous effects of alcohol was fully recognized by the profession, inebriate asylums would not become popular. Hence the need of a crusade along this line was the most pressing need of the hour. Had he lived he would have been at the head of a lecture bureau to carry on a regular systematic agitation of the dangers of alcohol, exclusively by physicians. This was to be an independent movement, not under any society auspices. In the midst of most active work and plans for the benefit of others, he was taken with acute pneumonia, and died after a few days' illness. The funeral was the occasion for the silent tribute of large crowds of people, and many stirring eulogies from the press and clergy. Thus the intense, imperious, hurried journey of his life was ended. The curtain went down while the play was in full progress, and the central figure of the scene disappeared. Dr. Quimby was known to a very large number of medical men in the American Medical Association as one of the most active ready speakers and managers. He was intensely loyal to the best interests of the Association, and always served willingly on all committees and in all positions of honor for the best interest of all. He was above rings, and was always broad and generous and fair in all questions of difference of opinion. As a surgeon, he was resourceful and very quick to conceive and act for the best interests at the time and occasion. As a physician, he was conservative, sympathetic, and judicial, winning and retaining the respect of a large clientele. As a man and neighbor he was very popular.

and was often appealed to for advice on many subjects outside of professional work. He was a man of strong intuitional mind, who saw the meaning of thoughts and events that were not clear to the average person. Often this involved him in apparent inconsistencies, which were cleared away after a time. In this way he was often misunderstood and criticised, but finally was recognized and admired by many of the previous most bitter detractors.

Dr. Quimby will be remembered in his day and generation as a most active man in every good work for the benefit of his fellows. He impressed his individuality and spirit on all he came in contact with, and we can say truly the world is better for his life and living. His pioneer work is ended and he is called away, and we can follow in his pathway, thankful for his influence, his spirit, and example.

The opium specific discoverers who claim such marvelous results, and offer to verify their statements, fail to realize that a great army of scientific workers are waiting to test their work, and are ready to welcome with open arms any new discovery and discoverer. If any man has found a drug or combination of drugs that in any way is a specific, he can have no fear of his facts and reputation. They are assured beyond all question. New truths cannot be hid in a bushel, or stolen from the finder. The scientific public are not selfish or mercenary, and concealment and mystery is fatal to the growth of any new truth. If the discoverer is afraid of publicity of his new facts, it is a fatal admission that they are not realities, and that they cannot stand the test of examination, but must seek concealment and mystery to live.

TOXIC AGENTS AND DEGENERACY.*

BY EUGENE S. TALBOT, M.D., D.D.S.

Fellow of the Chicago Academy of Medicine; Professor of Dental and Oral Surgery, Woman's Medical College, Chicago, etc.

The toxic agents which influence the race toward degeneracy exert that deterioration in a mode which closely resembles that of the degenerative powers of the acute and chronic contagions and infections. The acute poisonings by these toxic agencies resemble the acute, nervous, and other exhaustion caused by the toxin of the germs underlying the infections and contagions. The chronic conditions due to these toxic agents agree in many respects with the chronic states produced by the infections and contagions. The toxic agencies are divisible into those belonging to the condiments, medicines, foods, and beverages, and those arising from occupations.

Tobacco is the most common, while alcohol and opium contend for second place both as to use and as to deleterious effects. Alcohol has been repeatedly charged with being *the* factor in degeneracy. Statistics of the first half of the present century seem to justify the conclusion that it is apparently the most potent factor, yet these statistics as a rule confound coincidence and cause, or effect and cause, or the vicious circles thereby resulting, to a remarkable degree. There are but few races in which alcohol has not been used and abused. The American Indians had tizwein, chica, and pulque long ere Columbus; the Tartars and Russians, bouza, kvas, and kumyss; the South Sea Islanders ava and toddy (from the

* A chapter from degeneracy, its signs, causes, and effects. Now in press in the Contemporary Science Series.

cocoanut); the Tunisians, laymi. The vast majority of the races of mankind have used alcoholic beverages. Each was called by a local name and not by a word, a most demonstrable evidence of local origin.

Even the social insects (bees and ants) at times indulge in fruit ferments. The claim, therefore, that alcohol is the product of high civilization, hence of recent origin, and hence peculiarly destructive, is untenable. That excess in alcohol frequently occurs in degenerate stocks is, however, undeniable.

Kiernan cites twenty-three cases in which degenerate stocks were charged to alcoholic parentage, but which on analysis proved to be due to a degenerative factor in the parents, of which alcoholism was merely an expression. Nearly all the offspring born after inebriety were prematurely born, defective, epileptic, hysteric, insane, idiots, or criminals. Some few were healthy, apart from their intolerance of alcohol. In eighteen cases both father and mother were alcoholists. The fathers in four of these cases had been temperate, industrious, and affectionate ere being sunstruck. Following this came periods of irritability, excessive drinking, and spendthriftiness. The mothers had remained for some years after the fathers' breakdown free from the use of alcohol, but were nervously exhausted from the strain. One became depressed during pregnancy, was given gin for the depression, and the habit persisted after the delivery. In the three other cases painful menses developed during the nervous exhaustion. The popular prescription for these, gin, was given, with the result of producing inebriety. In ten cases skull injury to the father had like results on both mother and father. In two cases the mother became a victim of painful menstruation after a railroad accident; gin drinking, to relieve this, followed and became a habit. The father's nervous system broke down under the strain, and both became inebriates. In two other cases nervous exhaustion from typhoid and typhus fever produced the same outcome in inebriety on the part of the father and mother. In the re-

remaining cases the inebriety was an expression of nerve exhaustion after various protracted infections. The alcoholism in these cases was clearly an expression of the factors of race deterioration, producing degeneracy, and not its cause.

The influence of alcohol must, therefore, first be studied on the individual to determine its value and method of action as a cause of race deterioration. Careful medical researches have shown that alcohol produces a nervous state closely resembling that induced by the contagions and infections, often accompanied with mental disturbance (delirium tremens and acute types of insanity). The acute nervous state to which the term alcoholism was applied by Magnus Huss has all the essential characteristics of the nervous state due to the contagions and infections. There is, however, a greater tendency to impotence and sterility in the alcohol nervous state than in the others, and consequently a lesser influence on race deterioration. The condition, moreover, has a tendency to set into action degenerative tendencies latent in the liver and kidneys charged to alcohol, and justly, but as an exciting cause only. This action of alcohol on the liver and kidneys so interferes with their functions as to produce the effect already described as resulting in the contagions and infections from their toxins. Alcohol exerts a similarly deteriorating influence on the antitoxin-forming organs (especially on the testicles, ovaries, and their appendages) to that already described as exerted by the toxins of the contagions and infections. To the direct toxic effects of alcohol are, therefore, added results of imperfect liver and kidney action and defective strengthening powers from deficient antitoxin secretion. Like all toxic agents, alcohol interferes with the functions of the eye and ear nerves. Special weakness thus created is transmissible to the offspring. The chronic type of alcoholism may well be compared in its effect with chronic contagions. There is, however, less tendency to infection with the microbes forming pus. There is a greater tendency to deteriorating action on the nervous system. There is in chronic

alcoholism, as in syphilis, special tendency to that formation of connective tissue which destroys organs. The chronic mental disorders of chronic alcoholism resemble those of tuberculosis except than the capricious state and exaltation are less frequent than the suspicious tendency which is deeper, and takes the direction of delusions of poisoning and insane jealousy. The last are due to the deteriorating influence of alcohol on the generative organs. The parallel between the chronic infections and contagions and alcohol could be extended still further, since worry breaks down the abstinent parent in alcoholism, and thus destroys resistance to infection.

Alcohol may limit its action to the central nervous system, and thus produce hereditary losses of power. It causes changes in the peripheral nerves which in the offspring find expression in spinal cord and brain disorder through extension of the morbid process. But for its deteriorating effects on the ovaries and testicles, alcohol would be the most serious social danger. Through these last it tends to prevent the survival of the unfit, rather than to develop degenerates.

Opium seems to be the Charybdis on which the human bark strikes when escaping from the Scylla of alcohol. Its abuse as a narcotic is much older, even among the English-speaking races, than is generally suspected. Murrell, over ten years ago, demonstrated that the inhabitants of the fens of Lincolnshire had long employed opium as a prophylactic against malaria. The ratio of insanity in these regions proved to be very great. The same conditions obtained in certain malarial regions of New Jersey and Pennsylvania, where the use of strong infusions of poppy was common. The statistics of Rush as to opium-caused insanity in Pennsylvania indicate that the percentage of American opium abuses at the beginning of the nineteenth century was very great. The drug differs in two serious respects from alcohol. It is nearer in chemical composition to nerve tissue, and the tendency to its use may be transmitted by the mother directly to the foetus. This, as Bureau and Ringer have shown, receives through the

placenta from its opium-using mother a certain amount of morphine. In consequence, the child in the first month of infancy must be nourished on the milk of an opium-using woman, or given opium in some other way lest it perish. To this fact Calkins was the first to call attention. His results were corroborated later by Hubbard, Kiernan of Chicago, Erlenmeyer of Berlin, E. P. Earle of Chicago, Mattison of Brooklyn, Hughes of St. Louis, and others. Amabile of New York showed that not only were the children of opium-using mothers born with tendency to the opium habit, but that the mothers aborted frequently with twins, and that the children who survived were very liable to convulsions. Independently of this factor the mental state produced by opium habit resembles in many respects that of the lunatic, in that the victim of opium is as unable to distinguish between his wishes and the facts, and, therefore, often utters what appear to be sheer lies. Hence, he is totally unreliable and has taken a step in mental and moral degeneracy that, by the ordinary laws of heredity, must greatly increase, unless corrected by healthy atavism and training in the next generation. Opium is a more dangerous factor of degeneracy than alcohol, since the opium-user must be in a continuous state of intoxication to carry on his usual avocation, while abstinence is perfectly compatible with proper work on the part of the drunkard. The opium habit is increased by the peculiar propaganda carried on by the *habitués* who justify their position by urging the use of opium for any ailment, however minimal. Opium, like alcohol, causes nervous exhaustion similar to, but greater than those of the contagions and infections. From the affinity of opium to nerve tissue, from its tendency to stimulate the heart, thus causing increased blood supply to the brain; from its action on the bowels and the increased resultant work of the liver, this nervous state is much intensified. Opium does not have as great tendencies to interfere with the structure of the ovary and testicles as alcohol, hence, the greater danger of the opium *habitué's* children surviving.

sometimes of the trachea and bronchi predisposing to consumption. Nicotine amblyopia, or sight weakness, is common, with central disturbances of the field of vision and with color-weakness of sight. Often there is disorder of the ear tubes and congestion of drum, with loss of power of the hearing nerves, and consequent noises in the ear. The central nervous system is affected. In high schools, non-smokers get on better than smokers. Children from 9 to 15 years of age exhibit less intelligence, laziness, or other degenerative tendencies. Adults have head-pressure, sleeplessness, or drowsy stupor, depression, apathy, and dizziness. There may also be ataxic symptoms, parietic weakness of bowel and bladder, trembling and spasms. Tobacco insanities are comparatively rare in smokers, but are common in snuffers and still oftener in chewers. In the precursory stage, which lasts about three months, there is general uneasiness, restlessness, anxiety, sleeplessness, and mental depression, often of a religious type. After this occurs precordial anxiety, and finally the psychosis proper, consisting of three stages: 1. Hallucinations of all senses, suicidal tendency, depression of spirits, attacks of fright with tendency to violence and sleeplessness. 2. Exhilaration, slight emotional exaltation, agreeable hallucinations after from two to four weeks' relaxation, again followed by excitement. 3. The intervals between exaltation and depression diminish, the patient becomes irritable, but otherwise not alive to his surroundings, and perception and attention are lessened. The patient may be cured in five or six months if he stop tobacco during the first stage. In a year or so he may recover during the second stage. After the third stage the disease is frequently incurable. As the patient often becomes (especially by the use of the cigarette) an *habitué* ere puberty, the proper development and balance of the sexual and intellectual system is checked. These patients break down mentally and physically between 14 and 25. The moral delinquencies, other than sexual, are often an especial tendency to forgery and deceit of parents. Fre-

Opium, when smoked, stimulates the reproductive apparatus, and thus would greatly increase the number of degenerates due to this habit but for the defects due to the inheritance of the habit and their consequences.

The origin of the use of tobacco is usually ascribed to the New World. There is no doubt that immediately subsequent to the discovery of America, the use of tobacco spread over the world, and that its employment by Sir Walter Raleigh made its use fashionable. It is certain, however, that the Romans and Irish employed pipes for smoking long ere the Christian era, but the substances smoked were not tobacco but dried aromatic leaves. The English before Columbus did the same. In Western Asia historic botanical evidence leaves no doubt that tobacco was indigenous. Tobacco use from the East hence probably encountered tobacco from the West, both currents meeting in Asia Minor. As with alcohol and opium, the statistic method generally adopted proves fallacious when applied to the degenerative effects of tobacco. Study of its effects on the individual is needed to determine its effects on the race. The most careful researches show that the typical effects occur as a rule after long-continued use of tobacco, sometimes not until twenty years or more. While many smokers reach old age, many fail to live to old age because they are smokers. The skin is the subject of itching and reddening, the nerves of taste are blunted, and patches develop in throat, loss of appetite, epigastric fullness, pain, vomiting, and disturbance of bowel function are common. Menstrual disturbance occurs in women. In female cigar-makers abortion and pluriparity are frequent. The sexual appetite is impaired and sometimes sterility and impotence occur. Disturbed heart action, palpitation, rapid and intermitting pulse, precordial anxiety, weakness, faintness, and collapse with sclerosis of the coronary arteries of the heart and left ventricular hypertrophy. Cigars and cigarettes produce irritation of the nose, mucous membrane, diminished smell, chronic hyperaemia of the epiglottis and larynx, and

quently the insanity of puberty (hebephrenia) is precipitated by tobacco. The cigarette, if used moderately, may be a sedative, but as used is a stimulant, and is often made of spoiled tobacco, resembling in reaction morphine, and on animals acting in a somewhat similar manner. As tobacco turns the salivary glands (which are concerned in digestion of starch) into excretory glands, it leads to imperfect digestion of starch, to consequent irregular fermentation in the bowel, thus at once furnishing a culture medium for microbes, to form more violent toxins from and also creating leucomaines, to interfere especially with a nervous system overstimulated by nicotine. This is one great reason why those who snuff and chew tobacco more frequently become insane from tobacco than smokers, albeit these last are not exempt.

Statistics from the female employes of the Spanish, French, Cuban, and American tobacco factories, while defective and somewhat vitiated by the co-existence of other conditions producing degeneracy, support the opinion that the maternal tobacco habit (whether intentional or the result of an atmosphere consequent on occupation) is the cause of frequent miscarriage, of high infantile mortality, of defective children, and of infantile convulsions.

Tobacco, therefore, in its influence on the paternal and maternal organism, exhausts the nervous system so that an acquired neurosis results in such a way as to be transmissible.

Professional tea-tasters have long been known to suffer from nervous symptoms: very early in the practice of their occupation the head pressure symptoms of neurasthenia occur. Tremor also occurs early. While changes in the optic nerve have not been demonstrated beyond a doubt, still eye disorders have been observed in the pauper tea-drinkers of the United States and in the tea-tasters of Russia, thus indicating that similar changes to those produced by tobacco and alcohol are likely to occur in the optic nerve from tea. Brullard has found that tea has a cumulative effect. In his experience toxic

effects are not produced by less than five cups daily. The symptoms manifested are those of nervous excitement resembling hysteria, at times almost amounting to fury; nervous dyspepsia; rapid and irregular heart action; neuralgia of the heart; helmet-like sensation on the head, and tenderness along the spine. James Wood of Brooklyn found that ten per cent. of those under treatment at the city hospitals exhibited similar symptoms. Of these, 69 per cent. were females. Every symptom ascribed by Brullard to tea was found by Wood in his cases, who also found that the women manifested irregularities in menstruation of neurasthenic or hysteric type. He has found these symptoms to be produced by one-half of the quantity of tea charged with these effects by Brullard. The *Lancet*, several years ago, from an editorial analysis of the effects of tea-tipping, took the position that in no small degree nervous symptoms occurring in children during infancy were due to the practice of the mothers, both of the working and society class, indulging in the excessive use of tea, the excess being judged by its effects on the individual and not by the amount taken. Convulsions and resultant infantile paralysis were frequently noticed among the children of these tea-tippers. Observations among the factory population and the workers in the clothing sweating-shops show that tea neurasthenia, presenting all the ordinary symptoms of nervous exhaustion, is especially common among these. It is evident that tea produces a grave form of neurasthenia readily transmissible to descendants. In addition to its effects directly upon the nervous system, tea tends to check both stomach and bowel digestion, and thus increases the self-poisoning which is so prominent a cause, consequence, and aggravation of these nervous conditions.

Coffee exerts a very similar action to that of tea, albeit the nervous symptoms produced by it are usually secondary to the disturbances of the stomach and bowel digestion. Coffee produces tremor, insomnia, nervous dyspepsia, and helmet sensa-

tions. With the exception of certain districts of the United States, coffee abuse is not carried to such an extent as tea, albeit in these, as in some portions of Germany, the habit is an excessive one. The conditions described result in Germany as frequently as they do in the United States. Mendel finds that in Germany coffee inebriety is increasing and supplanting alcohol. Profound depression with sleeplessness and frequent vertex headache are early symptoms. Strong coffee will remove these temporarily, but it soon loses its effects, and they recur. There is much tremor, especially of the hands. The heart's action is rapid and irregular. Nervous dyspepsia is frequent. L. Bremer of St. Louis, Mo., has observed similar conditions among both Germans and Americans there.

While coca took its place only recently among the toxic causes of degeneracy, it was old as a factor in the degeneration of the Peruvian long ere the discovery of America by Columbus. Forty-three years ago Johnston wrote that even Europeans in different parts of Peru had fallen into the coca habit long practiced by the Indians. A confirmed chewer of coca is called a *coquéro*, and he becomes more thoroughly a slave to the leaf than the inveterate drunkard is to alcohol. Sometimes the *coquéro* is overtaken by an irresistible craving, and betakes himself for days together to the woods, and there indulges unrestrainedly in coca. Young men of the best families of Peru are considered incurable when addicted to this extreme degree of excess. They abandon white society, and live in the woods or in Indian villages. In Peru the term white *coquéro* has the same sense as irreclaimable drunken tramp. The inveterate *coquéro* has an unsteady gait, yellow skin, quivering lips, hesitant speech, and general apathy. The drug has assumed an unusual prominence in the field of degeneracy since the discovery of its alkaloid, cocaine. Since then there has sprung into existence, in both Europe and the English-speaking countries the world over, a habit which, while much over-estimated, is undoubtedly growing and aggravating as well as producing degeneracy. Many of the

cases reported as due to cocaine are, however, chargeable to the desire of the hysteric or neurasthenic to secure a new sensation, or the desire on the part of the opium or whisky *habitué* to try a dodge for forgiveness by friends. The habit is very frequently induced by patent medicines taken to cure catarrh by the neurasthenic, or to cure nervousness by hysterics as well. As the deformities of the nose passages predispose to what is called "catarrh," patent medicines for local application containing cocaine are frequently employed in the treatment of this supposed constitutional disease, with the result of aggravating the original degeneracy. As the youth under the stress of puberty generally ascribes all his ills to catarrh, he also employs very frequently snuffs containing cocaine, and has his nervous condition much aggravated thereby. Among the nostrums urged in the newspapers and magazines for this condition so often resultant on nerve stress is a certain notorious snuff containing 3 per cent. of cocaine. From the description given by Johnston of the *coquéro* there can be no doubt but tramps, errabund lunatics, and paupers result from this habit, to give birth to degenerates in the next generation.

Lead has been found to produce in those exposed to its fumes a systematic nervous exhaustion, characterized by local paralysis about the wrist as well as the general symptoms of profound systemic nerve tire. This may result, as Tanquerel de Planches pointed out nearly half a century ago, in acute insanity of the confusional type followed very often by forms of mental disorder of a chronic type resembling parietic dementia. In some cases the patient recovers from the acute insanity to suffer thereafter from epilepsy. In other cases, as Kiernan has shown, an irritable suspicious condition results, in which the patient may live for years, marry, and leave offspring. This last condition and the epileptic are the most dangerous as to the production of degeneracy. As has already been pointed out, the women employed in the pottery factories in Germany suffer, according to Rennert,

from a form of lead poisoning which produces decidedly degenerative effects upon the offspring. These women had frequent abortions, often produced deaf-mutes, and very frequently macrocephalic children.

Brass-workers suffer from a very similar nervous condition to that produced by lead. Hogden of Birmingham called attention to the grave forms of nervous exhaustion produced among brass-workers. The period during which the patient is able to pursue the occupation without breaking down is longer than that of the lead workers. Women, like men, are exposed to this condition. The chief effect produced, so far as offspring have been observed, is chiefly frequent abortions and infantile paralysis.

The occupations employing mercury, whether mining, mirror-making, or gilding, produce forms of systemic nervous exhaustion in which the most marked (but least important from a sanitary standpoint) symptom is a tremor amounting at times almost to shaking-palsy. Like all other systemic nervous exhaustions, the mercurial one may appear as degeneracy in the offspring. The employment of women in match factories and tenement-house sweating shops is growing. The chief toxic effects of phosphorus are not the localized jaw necrosis. This is but an evidence of the progressive system saturation with phosphorus. It bears the same relation to the more dangerous effects of phosphorus that "blue gum" does to the systemic effects of lead.

Every condition arising from a toxic cause capable of producing profound systemic nervous exhaustion in the ancestor, and especially the ancestress, is likely to be transmitted as degeneracy to the descendant. Undoubtedly, with the growing tendency of woman to pass from the ill-paid work of the seamstress to the better paid but dangerous occupations, a certain seeming increase in degeneracy must result.

THE INFLUENCE OF ALCOHOL ON MUSCULAR
WORK.

BY DR. E. DESTREE,

Professor in the University of Brussels, Hospital Physician.

The members of the Anti-Alcohol Leagues have often been blamed for their extreme zeal in the struggle in which they are engaged, and there are those who fear that their efforts will be futile on account of the vehemence with which they labor. Scientific considerations are relied upon to show that alcohol is by no means the fearful monster to which statistics attribute so many evils. The defenders of alcohol renounce the confirmed alcoholic who drinks under all circumstances of life, to drown his sorrow, to give better expression to his joy, to sweeten his repose, to stimulate his power for work, to refresh him, and to warm him when cold. But these same advocates seek to make apparent the good that alcohol can do in many cases, and recommend its use, considering it a useful and necessary stimulant.

Is alcohol a stimulant. Hitherto a large number of physiologists had appeared to admit it, but the arguments on which they base this reasoning have all, one after another, been tested by experiment, especially in these latter days. We are just arriving at the idea that the exhilarating effects of alcohol, momentary as they are, are in no sense especially characteristic of alcohol; that they only result from local irritation with reflex radiation, and that in reality the characteristic action of alcohol is depressant and narcotic. In the last analysis it seems the first effect of alcohol is due only to its irritating action on the stomach, and alcohol is hardly more a stimulant to the nervous system than mustard, for example;

whereas what is alone evident is the depression of the nervous system.

Thus it seems that all the vigor which alcohol produces, even momentarily, is factitious: that alcohol cannot of itself stimulate the intellectual faculties nor the circulatory system, for example, and that experiments which show us alcohol as a stimulant, those of Bintlz, for example, are simply phenomena badly interpreted, as the alcoholic stimulation which every one has had opportunity to observe is but a delusion.

In proportion as researches multiply, the opinion of Schmeideberg, who regards alcohol as a paralyzing agent, tends to prevail. The phenomena of drunkenness in its first stages, moreover, which we have been accustomed to look upon as due to stimulation of the cerebral centers, have been interpreted quite otherwise. All modern experimenters are beginning more and more to admit the progressive paralysis of the brain centers, commencing with the highest and extending gradually to those oldest in the course of evolution. The highest faculties disappear first, the judgment and reflection are paralyzed, and as Schmeideberg says:

“The soldier becomes more courageous because he is less concerned about the dangers and thinks less about himself. The speaker does not allow himself to be embarrassed by his audience, and so he speaks with greater freedom and enthusiasm.”

Its depressing effect on temperature and on the process of nutrition is generally admitted. It has been proved by experiment that alcohol lowers the temperature, and if the man who takes brandy to warm himself has a sensation of warmth, this is but a subjective impression due to the dilation of the blood vessels of the skin. We have only such sensations of warmth as are transmitted by the skin, and in this instance we are the sport of a delusion.

The stimulating action of alcohol upon the heart, which has been thought to admit of no dispute, may be explained in quite another way: and if the heart under certain conditions,

and not always, begins to beat more vigorously under the influence of alcoholic drinks, this results partly from the paralytic dilation of the blood vessels and partly from the momentary irritation of the mucous membrane of the stomach, leading by reflex action to an exaggeration of the heart's action. But in all this there are no real effects of stimulation due to the alcohol itself and conveyed to the nervous system, which controls the action of the heart.

Thus, one after another, the so-called stimulating effects of alcohol upon the organism must be abandoned, these are but the indirect results of local causes, and the alcohol in itself possesses only a narcotic action which is quickly evident and alone remains manifest and indisputable.

There are two classes of effects on which the partisans of the theory that alcohol is a stimulant have been able to count with apparent justice in combating the opinion of Schmiedeberg, who admits only narcotic effects as characteristic of alcoholic drinks. These effects are, first, the exaggeration of the movements of respiration, noticeable after the administration of alcohol, and, second, the muscular power which the use of alcohol seems to furnish.

As to the phenomena of stimulation that alcohol is said to cause in connection with respiration, a recent work of Jacquet seems to settle the question. This author has proved that the stimulating action of alcohol on respiration is due to excitation of nerve centers whose source of irritation is peripheral. By suppressing the direct irritation at the point of application the respiratory centers are no longer stimulated, and the movements of respiration are no longer increased.

There remains finally the stimulating effect of alcohol on muscular work. Is alcohol really advantageous, and does it really develop more kilogrammeters of energy? Does it lessen fatigue, does it make work not only easier but more productive, or is not this, too, a fatal delusion?

This is the question to which I wish to draw particular attention, for it is being much discussed at the present time.

and its positive solution would destroy the main argument of those who maintain that the use of alcohol is a necessity for the working man.

We now find ourselves face to face with a discussion which is not concluded, which, prosecuted in the laboratories for almost a century, treated in many monographs, has led in turn to the admission with Liebig and Boucharlat that alcohol is a respiratory, hydrocarbonate food, then with Gubler and Bintz that it is a conserving agent, one of those extraordinary remedies, almost supernatural, I may say, which, furnishing nothing to be transformed into work, would permit the organism to produce more work: then finally to the admission, with Carpenter, that the effect of alcohol is merely a spur, a means which may be of use, it is true, to produce a momentary effect, but one which, with a rider who considers the health of his charger, will never take the place of the measure of oats.

To which of these opinions shall the preference be given? Has any one of them been experimentally demonstrated? The experience of everyday life has been brought forward to excuse the use of alcohol by the manual laborer, and even to show its necessity, but this is in no sense a rigorously scientific argument. The use of tobacco is universal, yet nobody will maintain that smoking can be considered an act capable of furnishing useful elements in work and even of increasing its product.

In this series of observations it would be easy to collect many proofs which condemn the use of alcohol. In expeditions to warm countries its use is considered injurious.

Says Arnold, quoting Parkes:

“Sir Garnet Wolsey, in his expedition against the Ashanti, found himself better off in all respects by having replaced alcohol by tea among his soldiers. In strength, discipline, and good spirits they were markedly superior to armies which drink alcoholic liquors.”

It is the same in cold countries and in temperate regions. Most arctic explorers reject the use of alcohol, which they

consider a temporary stimulant for effects of which they pay too dearly. And we know that mountain guides, balloonists, bicyclists, so numerous nowadays, and athletes in general, recognize the bad effect of alcohol on the muscular energy developed.

But these are the conclusions of a superficial observation and the facts may have been wrongly interpreted on account of the varying circumstances under which these phenomena have been produced.

If we wish to solve the problem in a scientific manner, two ways are open. Either we may employ the methods of biological chemistry, to trace the course of alcohol taken into the system, studying its transformations and the number of calories it can furnish the muscles to be transformed into work; or we may eliminate accessory conditions and investigate the energy developed by a muscle or group of muscles when the organism is under the influence of alcoholic drinks and when it is not.

The first method of research, that based on physiological chemistry, has led to some very interesting discoveries. By this means it has been learned that alcohol is to a great extent oxidized in the organisms, and that its combustion serves, therefore, to produce a certain amount of energy by which our body may profit. But there is no proof that this energy can be transformed into work; on the contrary, it appears that this energy is only expended in the form of heat, and that really all the good which we can find alcohol does is to cause a certain economy in the combustion of other elements.

This is no great advantage, for the slight heat caused by the internal combustion of alcohol, which contains but little carbon and hydrogen compared with real foods, is counterbalanced by the effect of alcohol in lowering the temperature of the body. The dilation of the blood vessels of the skin, the increased radiation from the surface of the body, facts proven by experiments, far more than compensate for the slight gain

in heat which the combustion of a few grams of alcohol can produce in the system.

Nothing whatever in physiological chemistry authorizes us to admit that alcohol has a favorable influence on muscular work. Bunge asserts that the effects felt are only a symptom of brain paralysis, a benumbing of all feeling of weariness.

"It is a common idea," remarks this author, "that alcohol gives strength to the weary, and renders one better able to endure further exertion. The sensation of fatigue is the safety-valve, as it were, of our machine. To stifle the feeling of fatigue in order to be able to work on is like forcibly closing the safety-valve to increase the steam pressure. The belief that alcohol gives strength to the weary is particularly dangerous to working men as a class. We see poor people who can hardly live on their wages spending a large portion of their earnings for wine and brandy, instead of using their money to buy plenty of wholesome food, which alone can give them strength for their hard work."

This is the conclusion of modern physiologists. It is once more a question of prejudice and delusion.

One method of research remains to us: it is the direct study of the work obtained under the influence of alcohol. To aid us in this study, we have at our disposal statistics obtained by means of the dynameter, and the very precise tests made with the ergograph by Moss.

The construction of this apparatus is tolerably well known. A special arrangement prevents the action of any other muscle than those which bend the middle finger of the hand. By means of a small cord passed around a pulley, the finger raises vertically a weight, which in our experiments was about five kilograms; to the cord is attached a needle which records on a dial the height to which the weight has been raised. The different heights recorded, multiplied by five, the number of kilograms and fractions of a kilogram of work produced in each series of experiments.

With this apparatus. Mr. Herman Frey recently investi-

gated the subject of the influence of alcohol on muscular fatigue. Of these researches I shall speak presently at some length. As a result of his experiments, Mr. Frey arrived at some conclusions which were so unexpected that I have thought it would be of interest to repeat them, taking care to preserve the same conditions for my experiments as the Swiss author.

Mr. Frey first investigated the influence of alcohol on a muscle which had performed no work. Following the suggestions of Moss and Maggiora, he had a weight of four or five kilos raised successively every two seconds.

The author then gave the subject of the experiment an alcoholic drink (beer, alcoholized water), and had this followed, after a greater or less interval, by a new series of elevations. He thus obtained a series of results of great interest. Let us take, for example, one of the most typical:

1st series,	1.995 kgm.
2d series,	1.875 kgm.
3d series (ten min. after giving ten gr. alc. in 90 gr. H ₂ O),	1.750 kgm.

The conclusion to be drawn from almost all, but not all, the tables is that alcohol has an injurious effect on an unwearied muscle, and manifestly diminishes the quantity of work produced. On the other hand, the sensation of fatigue is lessened by the use of alcohol, and work, consequently, appears easier.

These first conclusions are, of course, interesting, but they will surprise no one. It is quite otherwise when we compare the first part of the work with the second, where the author studies the action of alcohol on a wearied muscle.

The experiments are made in the same way: the subject of the experiment is required to raise a weight of five kilograms by his middle finger. The successive tests are made every two seconds, with interruptions of two or three minutes between each two series. Under these conditions Frey obtained constant results in the case of all persons tested. There is a decrease in the feeling of weariness, and giving alcohol causes an

increment of work not otherwise obtained. Let us now consider, for an example, one of the records obtained by Frey:

1st series . . .	1.500	2d series . . .	0.575
3d series . . .	0.370	4th series . . .	0.155
5th series . . .	1.700	6th series . . .	1.150

It is thus evident, according to Frey, that there is a considerable difference in the effects produced by alcohol on muscular work, whether it acts on a wearied muscle or not. This conclusion was certainly unexpected, and the author felt this, and endeavored, in the last part of his work, to explain the reasons for this difference.

As the result of a new series of experiments, he concludes that alcohol has a double action; first a paralyzing effect on the central nervous system, causing a lessening of the sense of fatigue, and a peripheral action, rendering the muscles less excitable; second, an action due to the supply of new combustible matter which the muscles can use.

On the theory of this double action, all phenomena are readily explained. The first action, paralysis of the nervous system, is shown in the experiments with muscles which were not tired. In the tests with tired muscles this same effect is shown, but less plainly, we must admit, for we observe only that even the greatest elevations are not as high under the influence of alcohol as when the muscle is not submitted to the action of this depressant.

As to the supply of new materials for combustion, it is evident, especially from the results obtained with tired muscles transforming rapidly and effectively the latent force set free, that the gain resulting from the new materials for combustion far outweighs the paralyzing action of the alcohol.

Frey found himself quite naturally led to ask why this second action of alcohol is more plainly manifest when the muscle is tired and is not evident when that is not the case. The introduction of new matter as a result of combustion would seem at first thought to be as advantageous to a rested muscle as to a tired one.

According to Frey, the unwearied muscle is already supplied with the necessary material for producing its maximum of work, and this maximum it cannot surpass even with the addition of new matter. Of this new matter, the muscle has no need and it cannot make use of it.

In spite of the ingenuity of this explanation, and in spite of the records of several experiments made by the Swiss author, we must confess we are not yet positively convinced on this point, and that we have some hesitation in accepting as conclusion these two series of effects due to alcohol, which manifest themselves in turn with greater or less intensity.

We reviewed the question and repeated a long series of experiments of which we now wish to give the results. That which seemed to us most worthy of note is the question of the real existence of a difference in the effect of alcohol when taken in a state of fatigue or otherwise.

It should be stated at the outset that our investigations gave results identical with those of Frey when he studied the effect of alcohol on the tired muscle. The results obtained are always an increment of work.

We then investigated the effect of alcohol on the unwearied muscle. We believed that in doing as Frey did, that is, giving alcohol to the subject during a series of tests, when he had already exercised to the point of exhaustion, we were no longer dealing with an unwearied muscle, even after waiting ten minutes, but with a muscle already fatigued.

What then? We thought that by taking a subject of sober life and habits, always under the same conditions, at the same hour, three in the afternoon, drinking a glass of ordinary beer with his meal, we might, after repeated experiments take a mean of the work produced by this subject, according to the ergograph. The tests that we made in this case give us, for a medical student, M—— W——, age 24, a mean of

10.385 kilograms for the first series of elevations.

7.520 kilograms for the second series of elevations.

5.110 kilograms for the third series of elevations.

It is well to remember that these experiments are made by lifting a weight of five kilograms every second. The interval of rest after each series is two minutes.

If the subject of the experiment takes some alcohol before performing any work, all the other conditions remaining the same, the mean of work obtained changes, and we get the following:

- 14.315 kilogrammeters for the first series of lifts.
- 6.530 kilogrammeters for the second series of lifts.
- 4.325 kilogrammeters for the third series of lifts.

It appears that the first series gives about four kilogrammeters more of work in the second case than that obtained from the first series without the help of alcohol.

In this first series of experiments we come then to a conclusion entirely different from Frey's. We find that alcohol has a favorable effect on muscular work whether the muscle is fatigued or not. We found this effect in all the charts which we made. In trying to determine the reason why Frey came to such a different conclusion in his investigations on the tired muscle, we were able to throw light on a second effect of alcohol, to our mind by far the most important.

It should be noted in the preceding data that the second series gives an immediate result much lower when alcohol is taken: the product is even decidedly below that of the second series, where no alcohol had been taken. Moreover, this second series of trials to lift the weight was made two or three minutes after having taken alcohol, and the question may very properly be asked whether the subject had not at that time begun to feel the retarding and paralyzing effect of the alcohol.

If this be true, it is clear why Frey obtained as the result of alcohol only a paralyzing effect on an unwearied muscle, since in his experiments he took records of and exercised the muscle only after the alcohol had been given ten or twenty minutes.

We have thus sought to consider with the utmost detail the retarding effects of alcohol on muscular work. The subject is

one of profound interest, for it is a question of estimating the real value of alcohol. To recommend or tolerate the use of alcoholic beverages it is not enough to obtain a momentary gain such as is given by an effort; this temporary advantage must not be offset by prolonged exhaustion afterward.

Frey came to the conclusion, from his experiments, that this action is not so very transient, and also that fatigue often occurs following the use of alcohol.

It must be understood at once that our results in this investigation are quite unlike those of Frey.

Thus far, in all the experiments we have made we have observed that the stimulating effects of alcohol is very quickly manifested (one or two minutes after its ingestion), but that it disappears just as quickly (about fifteen minutes after its ingestion).

To define the exact moment when the effects disappear, we undertook a series of experiments, the results of which we will summarize by giving one or two examples.

All our experiments were made at the same hour, as much as possible under the same conditions, in order to get comparable results. Below is given an experiment made upon myself.

On the 31st of October, at 3 o'clock in the afternoon, I made six series of trials to lift a weight of five kilograms every second, with intervals of two minutes' rest after each series. These six tests gave the following results:

1st series,	3.310 kilogrammeters.
2d series,	1.360 kilogrammeters.
3d series,	0.935 kilogrammeters.
4th series,	1.015 kilogrammeters.
5th series,	0.585 kilogrammeters.
6th series,	0.595 kilogrammeters.
Total.	7.700 kilogrammeters.

I then took a rest of thirty minutes, and repeated the six series of tests with the following result:

1st series, 1.440 kilogrammeters.
2d series, 0.655 kilogrammeters.
3d series, 0.590 kilogrammeters.
4th series, 0.385 kilogrammeters.
5th series, 0.490 kilogrammeters.
6th series, 0.475 kilogrammeters.

Total, 4.035 kilogrammeters.

The difference between the two series (3.665) is the result of fatigue. Let us see if alcohol can remedy this feeling of fatigue.

Immediately after this last test, I took ten grams of cognac, 50 per cent. in 90 grams of water, and rested again for thirty minutes. I then obtained the following series:

1st series, 0.540 kilogrammeters.
2d series, 0.325 kilogrammeters.
3d series, 0.225 kilogrammeters.
4th series, 0.235 kilogrammeters.
5th series, 0.215 kilogrammeters.
6th series, 0.100 kilogrammeters.

Total, 1.540 kilogrammeters.

The alcohol had not overcome my fatigue: it had even added a paralyzing effect, such that this time my total work hardly equaled that which I was able to perform in the first series of my first repetition.

This paralyzing effect becomes more evident in the following example:

On the 29th of October, at 3 o'clock in the afternoon, I made a series of tests in raising a weight of five kilograms every second, with intervals of two minutes' rest between the series, until I was completely tired. I obtained the following results:

1st series, 4.770 kilogrammeters.
2d series, 1.755 kilogrammeters.
3d series, 1.620 kilogrammeters.
4th series, 1.110 kilogrammeters.
5th series, 1.320 kilogrammeters.
6th series, 1.145 kilogrammeters.
7th series, 1.090 kilogrammeters.

8th series, 0.815 kilogrammeters.

9th series, 1.020 kilogrammeters.

10th series, 0.485 kilogrammeters.

Total, 15.131 kilogrammeters.

Immediately afterward I took 10 grams of cognac in 90 grams of water and rested thirty minutes. I then undertook another series of tests, but could scarcely move the apparatus. The product of my work was ridiculously small. I took ten more grams of cognac, and not till then was my work appreciable. I recorded 0.455 kilogrammeters and stopped, exhausted.

From these experiments we see how intense is the final paralyzing effect of alcohol, and what bad policy it is, from a practical point of view, as regards the final product of work, to take alcoholic drinks with the vain hope of dispelling fatigue.

In the following experiment I sought to find out if the result would be the same when alcohol was taken during the progress of the work.

On the 7th of November, 1896, at 3 o'clock in the afternoon, I made thirteen series of tests in lifting a weight of five kilograms, under the same conditions as the preceding. I took 10 grams of alcohol (90 per cent.) in 90 grams of water before the sixth and the tenth series. These series gave me the following results:

1st series, 5.415 kilogrammeters.	2d series, 1.760 kilogrammeters.
3d series, 2.110 kilogrammeters.	4th series, 0.940 kilogrammeters.
5th series, 0.890 kilogrammeters.	6th series, 1.185 kilogrammeters.
7th series, 2.015 kilogrammeters.	8th series, 1.630 kilogrammeters.
9th series, 1.460 kilogrammeters.	10th series, 1.460 kilogrammeters.
11th series, 1.500 kilogrammeters.	12th series, 1.620 kilogrammeters.
	13th series, 1.225 kilogrammeters.

I rested twenty minutes and could only produce in the

1st series, 0.225 kilogrammeters.

2d series, 0.170 kilogrammeters.

3d series, 0.160 kilogrammeters.

after which I stopped, exhausted.

Whatever be the time at which alcohol is given, we see that after a momentary increase in the work product there is a profound drop in the scale. All my experiments agreed in this respect, and in certain cases, especially those of temperate persons, the paralyzing effect of alcohol was complete. In the case of a young physician, Dr. ———, whose muscular force was considerable, and who registered about eight kilogrammeters in a previous series of tests, he appeared half an hour after taking 10 grams of alcohol entirely without muscular power, to his own great mortification.

The precise moment when the paralyzing effect of alcohol becomes manifest varies slightly with the subject, but it is noticeable in the majority of cases in ten minutes after the alcohol has been given. This effect becomes more and more marked till the maximum is reached, usually twenty or thirty minutes after the alcohol has been taken.

The question may be asked whether this paralyzing effect, appearing as it does somewhat late, may not be overbalanced by the useful effect obtained at first, since under its influence we obtained a larger work product, from a wearied as well as from an unwearied muscle. Do these two effects exactly balance? Is there or is there not a benefit to the final work product resulting from the use of a little alcohol?

In answering this question the experiment below seems to me to point some interesting conclusions.

Dr. P., aged 28, whose power of work we already knew from various tests, made the following series of trials on the 6th of January.

- 1st series, 3.600 kilogrammeters.
- 2d series, 2.720 kilogrammeters.
- 3d series, 2.315 kilogrammeters.
- 4th series, 2.160 kilogrammeters.
- 5th series, 1.790 kilogrammeters.
- 6th series, 1.690 kilogrammeters.

Total, 14.075 kilogrammeters.

He paused and rested for half an hour, and then produced the following showing:

1st series, 2.520 kilogrammeters.
 2d series, 1.370 kilogrammeters.
 3d series, 1.450 kilogrammeters.
 4th series, 1.055 kilogrammeters.
 5th series, 0.910 kilogrammeters.
 6th series, 0.950 kilogrammeters.

Total, 8.255 kilogrammeters.

The total result obtained is 22.330 kilogrammeters, a result quite similar to those previously obtained.

The same experiment was made the next day under exactly the same conditions, the only difference being that in the latter case Dr. P. took 20 grams of alcohol immediately before commencing. The first series of tests in raising the weight was much more productive; the work product being a kilogrammeter more (0.930), but immediately afterwards, from 4.530 kilogrammeters, the product drops to

1.550 kilogrammeters. 0.995 kilogrammeters.
 0.920 kilogrammeters. 0.750 kilogrammeters.
 0.970 kilogrammeters.

Making a total of 10.765 kilogrammeters.

Under the influence of alcohol we obtain then, in spite of this splendid beginning, 3.310 kilogrammeters less.

If, after a period of 30 minutes' rest, the work is resumed, results are obtained thus:

1st series, 1.700 kilogrammeters.
 2d series, 0.760 kilogrammeters.
 3d series, 0.725 kilogrammeters.
 4th series, 0.660 kilogrammeters.
 5th series, 0.635 kilogrammeters.
 6th series, 0.650 kilogrammeters.

Total, 5.170 kilogrammeters.

Which represents a diminution of 3.085 kilogrammeters in the product as compared to the work produced without alcohol.

To summarize:

The Influence of Alcohol on Muscular Work. 37

Without the effect of alcohol, the product is 22.330.
With the effect of alcohol, the product is 15.935.
Loss. 6.395

The inevitable conclusion of all this is: alcohol is a deceptive means of dulling the sense of fatigue; but its action is temporary and in the end injurious, the paralyzing effects upon the nervous system increasing rapidly and with such force that any momentary good effect can not counterbalance them.

We thought it of interest to compare with the action of alcohol that of kola, coffee, and tea, the stimulating effect of which upon the nervous system is due chiefly to the presence of caffeine, and in recent years have often been made use of. A large number of hygienists recommend their use, and there is a general tendency among total abstainers to seek to replace alcoholic drinks by tea and coffee. From our special point of view has caffeine a good or bad influence on muscular work?

This is the last question to which I wish to draw your attention.

If, in the midst of some work, we take some citrate of caffeine, we get a stimulating effect much less marked than from alcohol, but this effect is much more prolonged, and no such rapid exhaustion of muscle occurs.

Thus, in the experiments which have been noted, we raised at the

- 1st trial, 3.020 kilogrammeters.
- 2d trial, 2.160 kilogrammeters.
- 3d trial, 1.920 kilogrammeters.

I took 20 centigrams of caffeine, and I obtained:

- At the 4th trial, 1.785 kilogrammeters.
- At the 5th trial, 1.435 kilogrammeters.
- At the 6th trial, 0.970 kilogrammeters.
- At the 7th trial, 1.120 kilogrammeters.
- At the 8th trial, 0.850 kilogrammeters.
- At the 9th trial, 1.015 kilogrammeters.
- At the 10th trial, 0.930 kilogrammeters.

Mean total, 15.205 kilogrammeters.

Let us compare the result thus obtained with the mean total, 14 or 15 kilogrammeters obtained from 10 consecutive tests, in another series, and note the very slight gain. If I then rest half an hour, to give an opportunity for the manifestation of depressing effects if they exist, as in the case of alcohol, I succeed in recording:

For the 1st series, 1.375 kilogrammeters.

For the 2d series, 1.055 kilogrammeters.

For the 3d series, 0.955 kilogrammeters.

Which may be the result of fatigue, but is plainly not to be compared to the results obtained when I took alcohol and waited the necessary time for the appearance of paralyzing effects.

Conclusions. According to these experiments it seems to us evident that:

1. Alcohol has a favorable effect on the work product, whether the muscle is weary or not.
2. This favorable effect appears almost immediately, but is very transitory.
3. Immediately afterward alcohol has a very decided paralyzing effect. About half an hour after taking alcohol, the muscular power reaches a maximum that subsequent doses increase with difficulty.
4. The subsequent paralyzing effect of alcohol outweighs the momentary stimulation, and the total work product obtained with the use of alcohol is less than that obtained without it.
5. Paralyzing effects are not observed to follow the use of tea, coffee, and kola.

The conclusions from these experiments offer one more justification from the realm of science, for the struggle against alcoholism, for the highest welfare of society.

MORAL INSANITY IN INEBRIETY.

By T. D. CROTHERS, M.D.

Superintendent Walnut Lodge Hospital, etc., Hartford, Conn.

The term "moral insanity" is applied to a class of symptoms about which much difference of opinion exists. Formerly this was a veritable battle-ground between metaphysicians and alienists, but latterly this has subsided, and the questions now in dispute are differentiations and exact meanings of terms. I shall limit my study of the subject to certain well-marked symptoms which, taken alone or associated with other symptoms, appear to have the same significance. Moral insanity is marked by a low sense of right and wrong, and by conduct which does not recognize the rights of others, or duty and obligation to any one. The ethical sense and consciousness of the relation to others, of truthfulness, of honesty, of respect for the good and true, for law, or for the opinions of others, is enfeebled or wanting altogether. Such cases may not exhibit marked intellectual weakness and may appear to have average judgment and discrimination in the conduct of affairs; yet have no moral sense of obligation to do right and to be truthful and honest to others. Such men are intriguing, deceitful, dishonest, taking advantage of every opportunity to gratify their most selfish desires irrespective of all consequences to others. The higher levels of cerebral development, which are the altruistic sentiments, the capacity to recognize and adjust conduct to the general good of all, are wanting. What is called character motive, purpose in life, or the morale of the man, his relations to others, are all the last-formed elements of brain growth. Insanity, which is confined to these psychic centers, is well established. Without doubt other

parts of the brain are affected, but they do not appear, except from a careful study. I think it also well established that sudden changes of character are always due to changes in the organic activities of the brain centers. It is asserted, and defended with many good reasons, that consciousness is an element of the brain which recognizes the higher relations of right and wrong, of duty, and all the higher psychic claims of justice and truthfulness and the relation to our fellow-man. The higher this development the stronger the man, and its absence or feebleness approaches imbecility. The general term "character and morale" describes this best. A veritable insanity in which this part of the brain was the most seriously affected has been described over a century ago. All the authorities recognize it, but attach widely differing importance to its meaning.

Cases like the following are not uncommon, and probably illustrate this condition more clearly than by theories: A. B., a physician of average ability, culture, and good character, with an excellent reputation for honesty and sobriety, began gradually to be untruthful, intriguing, and dishonest. He made out double bills and denied payment even when his signature on receipts was shown. He exaggerated his business, drove his children away from home, was cruel to his wife, and tyrannical to every one under his care. This increased and was not associated with any apparent intellectual changes. He was not passionate or emotional, but cool, and gave no explanation for his conduct. He became involved in forgery and assault, and died before the trial from some heart failure. This was moral insanity in which the physical basis was not recognized.

In inebriety these symptoms of moral defects and insanity are common, no matter what the conditions and standing of the person may be. It seems to follow the poisoning from alcohol inevitably, and in some cases very markedly. Two classes appear very prominently, one with heredity and the other apparently acquired. Wherever there is a marked

history of heredity, of alcoholic parents, or of neurotic degenerate ancestors, a feeble or deficient consciousness of right and wrong is found. Alcohol used continuously retards growth, diminishes vitality, and prevents development. Drinking parents have deficient vitality and are unable to transmit to the next generation full normal vigor. The last and highest formed element of brain power — consciousness — is the first to suffer from alcohol. Hence drinking parents cannot have children with full normal consciousness. This faculty will be wanting or very feebly developed. This is the rule to which the exceptions are rare. This defect may be associated with much intelligence and intellectual capacity and power to cover it up.

A man prominent in the political world is in private life devoid of all sense of justice, of right, and wrong, and duty to others. He is untruthful and dishonest, and, when his own interests are in conflict, will sacrifice any person or principle to gain his ends. He is of unsound intellect, yet able to pose behind a mask of honesty often acting honestly and talking of duty, but always from the most selfish motives. He is married, has a position in society, but keeps mistresses, and is open to every suggestion that promises his personal and selfish gratification. His parents were wine-dealers and drinkers, both of them waiting on customers over the bar. Only one child grew to manhood, and entered politics as a trade. He is temperate, but a moral paralytic, or a moral maniac with capacity to conceal this condition. A man who became one of the great swindlers and forgers of the day, but who was able to keep out of prison by intrigue and cunning, came from drinking parentage. To his associates he is known as without any sense of duty and obligation to any one and is a literal Bedouin.

That these conditions are due to inheritance is apparent from the following: A boy with excessive drinking parents was taken in infancy and educated in the most careful way.

All the higher faculties were cultivated to an unusual degree, and he entered the church as a brilliant clergyman. He was found to be untruthful in regard to himself, suspicious of others in matters of personal reputation, and grasping even up to the border of theft on many matters. The collections in the church had to be kept out of sight and always suffered if they passed through his hands. He became involved in spreading scandal, and seemed oblivious of the danger of such conduct, and broke up the church by his irregularities. For ten years, until his death, he was in continual trouble with every church he was associated with. Here the evidence was clear that he had inherited defective consciousness, which no training or surroundings could overcome.

In cases where inebriety has been acquired by accident, contagion, surroundings, and conditions of living, these moral insanities vary widely and are not so general, but are confined to particular things. In one case excessive untruthfulness and dishonesty in all business relations was associated with sympathetic tenderness to all his associates. In another, intense suspicion and doubt of the honesty of others was associated with excessive desire to be truthful. Another was excessively immoral, seeking opportunities for sexual intercourse at all times, was hysterically religious and anxious for the conversion of the world. Another was intriguing, secretive, treacherous, and uncertain in his talk and conduct, and yet lived a moral, upright life. These are almost infinite in variety and manifestation, and all show profound changes in the moral faculties. The more common forms are illustrated in this case: A. B., a business man of good reputation and standing in the community, began to drink after a protracted illness from typhoid fever. Two years later he was an inebriate. His mind continued bright and clear, but his character changed. He was deceitful, suspicious, and slanderous. He thought his sons and clerks were robbing him, and that his wife was in league with them. He had his books examined by an expert and was in doubt when they were

found correct. He told falsehoods about his business and family, and grew more and more egotistical about his mental capacity to reason and decide on all matters. He was harsh and tyrannical to his wife at times, lost all pride of character in the community and sense of duty to others. He was exacting to have anything done for his own interests, and oblivious of others and their feelings and tastes. As a patient, he was intensely selfish and grasping, even up to theft; was fawning and obsequious, promising everything and doing the opposite. He imagined evil of every one and told malicious stories without any foundation, then denied them. He was always reporting others as doing wrong, and supposed every one to have only the basest motives. He stopped drinking, but thought all others drank and concealed it. This man left the asylum and is yet sober after some years, but is morally insane.

In a general summary of the common symptoms following the use of alcohol, untruthfulness, or a low respect for their word, is most prominent. A man who previously took pride in the correctness of his promises and statements, will become indifferent, promise anything, make any statements, whether true or false. A man previously honest and trustworthy will be found doing dishonest things, cheating persons, taking advantage in little matters, and failing to act fairly in the interest of others. Then follows suspicion of motives and conduct, doubting the honesty and purity of persons. This deepens into delusions of intrigue and deception of others, extreme pessimism and doubt of everything, or a state of mind which may be called "combative erythesiasm" follows, in which the distress of others is pleasing. This is manifest in malicious criticism and scandal, pointing out faults and magnifying them, apparently enjoying the knowledge of the dishonesty and malice of others and the irritation which follows from the publicity which they give to it. Sexual conduct is without restraint: the ties of family and duty become less and less; intense personal selfishness to gratify every impulse at all expense follows. The taste for gambling and speculation

becomes a morbid impulse, often to retrieve their waning fortunes. Recklessness in the use of money, throwing it away without motive or purpose; or extreme parsimony to hoard it, and grasping selfishness, equally unseasonable, are common. As in other insanities, exaltation of the *ego* follows, and intense confidence in themselves and their power of reasoning and ability to do anything possible is present.

Many persons who exhibit all these symptoms appear to be but little changed in other respects. They carry on business, seemingly make plans and execute them, and appear to casual observers the same. These insanities seem to concentrate into particular lines or ranges of thought. Consciousness of truthfulness may be almost entirely absent, and in other respects appear the same. Moral recognition of the higher truths of faith and trust are gone, yet he may act sensibly and be a church member. In one case an inebriate lawyer doubted the honesty of every one and thought no one was pure or had good motives, and yet he acted on what seemed the opposite. It was surroundings alone that held him: the restraints of society covered up an insanity which only needed a favorable opportunity to break out. In another case, a teacher who had drunk many years became a secret thief, purloining everything which he fancied, and when likely to be detected restoring it in some mysterious way. He appeared and talked honestly, and yet when not observed took advantage of every opportunity to appropriate anything that came in his way. A number of cases of inebriates have been reported where this kleptomaniac impulse took on certain peculiar forms. Thus one man when drinking stole Bibles, another jewelry, and when discovered gave it up freely. One man stole washtubs. A woman inebriate always took aprons and towels; another man stole soap, and so on. The most unusual and unreasonable things were taken, concealed, and given up freely without any sense of the nature of the acts. One class of inebriates exhibit this insanity in malicious slander, another in extreme suspicion, another in vindictiveness to resent real or

imaginary evils, another in immorality and impurity of act and thought. Many of the chronic cases exhibit all these phases in one. The oft-repeated expression that "inebriety is criminality" is true in a general sense, when criminality is understood as a course of conduct in which duty, right, and obligation to each other are ignored. The inebriate has physically defective senses; he is not able to adjust himself to the outside world correctly, because his knowledge of their relations is imperfect. His power of reasoning is also deranged, because the impressions from without are faulty and the integrity of the normal action of the nervous system is impaired. The coarser lesions are well recognized and can be traced in all cases. Beyond this, conduct indicates the higher moral defects and changes. Psychological changes, as loss of pride, of character, of honor, respect for the truth, of duty to others, low motives or no motives, extreme pessimism, are the first and common changes which lead up to criminal acts. The paralyzing action of alcohol is first seen on the moral brain of consciousness; in the dullness and defective workings of the higher functional activities. The changes observed when a man is under the influence of spirits, is vaguely called the removal of the restraint of reason, and dominance of the animal impulses — the brute triumphing over the real man. In reality it is palsy of the consciousness, a cutting off of some part of the higher brain, and consequent confusion of the lower brain and its workings. Impressions and their meaning are confused and obscure; the higher relation of events and conditions of life are unrecognized. It is asserted that three per cent. of all persons born are without normal consciousness of right and wrong and their relations to others. They have retarded brain development. The part of the brain which constitutes the moral control or consciousness of the higher duties is wanting or undeveloped. Such persons are defectives, and insane in the general meaning of that word, and, like demented, are incapable of normal healthy adjustment to the relations of life. When an apparently normal

state of this brain function has existed and then a great abnormality follows in thought, word, and conduct, disease is present. Comparison of the conduct and character of inebriates before alcohol is used and after they become habitués, brings out some startling facts that are unrecognized.

From the lowest type of a demented inebriate on one side to the moderate drinker at meals and the fashionable clubman, there is a distinct relation and chain of cause and effect. The clear moral insanity of the one is traceable to the other without any sharp dividing lines. The moderate drinker and clubman who proves to be the defaulter, or who is involved in conduct that is criminal, or who becomes a principal in crime, is suffering from disease differing only in degree from the degenerate inebriate tramp. Moral insanity is a very prominent phase of all inebriety. Its absence in any given case is always an exception to the rule. A man with a high moral development after he becomes an inebriate may retain the form and externals of his previous character. He may be more emphatic in his display of some qualities, such as religion, truthfulness, and duty, and yet in other matters be oblivious of all obligation and duty. One such man, who prayed for inebriates and lectured on temperance, carried on an intrigue and sold his influence to the highest bidder. Another man acted as an agent for the sale of stolen goods, and at the same time carried on a great reform revival; and another was engaged in gold mine swindles, while lecturing every night for temperance. The moral insanity was called hypocrisy, and, in a legal phrase was malicious, criminal, and vicious. In reality it was degeneration and disease, the breaking down of one part of the brain while the others remained apparently clear. In our Civil War a noted general was drunk to excess at times; previously he was noted for his hearty frankness and honesty, but was found unreliable, intriguing, and failed when needed most. He showed petty weaknesses and untruthfulness, with malice that was unknown before in his character. He finally died a moral

wreck after the war was over, having become almost criminal in his thoughts and acts. A clergyman became a secret inebriate and later became involved in a low intrigue and was turned out of the pulpit. He was insane, his consciousness became palsied, and for a time he taught ethical truth automatically. The possibility of one part of the brain being affected and the rest doing normal work, and this condition being concealed, is a reality which every experience confirms. The very close relation of one part of the brain with the other makes it impossible for health and disease to exist together, and yet moral insanity may be present and be concealed from general observation. A study of conduct will reveal it and a comparison with previous conduct will show its growth and development. The inebriate who has lost pride of character and sense of duty and obligation, truthfulness and honor, may seem to be the same in many ways for a long time, but sooner or later this moral diseased condition will spread and his whole organism show degeneration. I shall conclude this brief study with the records of two cases which have occupied public attention and been the topic of bitter discussion.

CASE 1. JOHN BLANK. Father was a strolling actor of irregular character and an inebriate. He married a woman of average ability from a good family. The father died before John was born, and two years later his mother married again. John was brought up with great care and tenderness. His later education was of the best character. He was a leader of his class as a scholar and an athlete. To his mother and intimates he displayed an intense selfishness, putting his interests and desires above all others, and had no consideration of the pain and distress of others. He was cruel in his conduct to any one who was in his way to the achievement of any purpose or desire. He finally became a lawyer and was thoroughly unscrupulous in money matters, although not miserly or avaricious. As a politician he was without honor or pride of character and would stoop to anything to accomplish his purpose. He married a rich woman and soon after swindled his father-in-law and possessed himself of a large property. Then he drank and began to live a fast life, had

a mistress, attended horse races. Wherever he went he swindled and falsified and was feared by every one who had any dealings with him. He went into stock gambling and was swindled and swindled others. To his wife and children he was cruel and violent in his conduct. After a period of excessive use of spirits, he killed his wife and made no effort to conceal it, or run away. On the trial his schemes for deception and fraud were revealed, to the astonishment of every one. Truthfulness, honor, duty, and all the qualities which go to make character were absent. He was convicted, but the sentence was commuted to a life imprisonment. In this case moral idiocy was inherited. The higher part of the brain was undeveloped and beyond the reach of culture and education. Without culture he would have early sunk to a low tramp criminal and burglar, and been a pauper degenerate, dying early. With culture he became a higher grade of criminal, and yet he was unable to appreciate ethical truth or moral relations. He was insane from birth; alcohol intensified and developed this condition. The insanity was of the higher ethical brain, and concealed except to those who knew him intimately.

CASE 2. The second case came from a good family and was normal in all his relations to others. Was truthful, honest, and seemed generous and very kind. After a severe attack of typhoid fever, in which he was given large quantities of spirits, he began to use alcohol daily. His father died and left him in charge of a large business interest. His character changed. His regard for his word was lost. He was suspicious of his mother and brothers, and took money out of the business and concealed it. He left his home for a hotel, and, when drinking excessively, wrote violent scandalous letters to his family and employes. He associated with low women, but treated them harshly, refused to give them money, and was constantly in trouble. No public exposure disturbed him. He was frequently in court for petty swindles and refused to pay unless forced to. His business declined and was finally taken out of his hands, and he became a low blackmailer and beggar, drinking at all times and places. He was examined for lunacy and decided to be sane. No symptoms of insanity were found, nothing but willfulness and vicious cunning, was the opinion of Philadelphia experts. Finally, he was convicted as an acces-

sory to murder and incendiarism, and sent to prison for life. This was clearly moral insanity acquired. His family and early history showed no trace of defective consciousness or moral weakness. His parents were temperate, moral people, church members, above all suspicion. In his early life he attended church and Sunday-school, and was a lovable, attractive character. He began his business career with his father, and seemed in every way most honorable and honest. He displayed excellent judgment and was intrusted with large business interests which he faithfully executed. During the illness from typhoid fever his father died, and on his recovery he was put in charge of the business. A total change of character which followed his recovery might have been due to the spirits given, or the injury of some local center from the fever. At all events, the use of alcohol intensified and fixed this condition. In both of these a great deal of mental vigor and superficial sanity was associated with this low moral brain force. The experts could find no impairment of his reasoning and memory, and concluded his conduct was simply vicious.

In the first case immoralities and dishonesties of conduct were judged from the same point of view. To these experts, failures to observe the relations of right and wrong, duty and obligation, had no physical basis, and were mere psychic temporary lapses. The use of alcohol was accountable for this, and as this could be stopped any moment, it was a condition which the person could control at will. Fortunately, such views are but the survival of theories of long ago. The central point I wish to emphasize is that moral insanity follows all use of alcohol, and is present in all inebriates to a greater or less degree. This condition is inherited and acquired, and exists to a far greater extent than would be supposed. There are many excellent men who use spirits, not to a great excess, who are sufferers from disease. The constant beer and spirit drinker will be found to present the most numerous examples. This field of study will furnish defects and degenerations, which follow the same uniform laws as other more apparent lesions.

Abstracts and Reviews.

DIPSOMANIA.

BY MILTON J. PARKE, B. S., M.D., Cleveland.

Visiting Physician St. John's Hospital.

While the term dipsomania may be properly applied to the irresistible craving for any one of a long list of drugs, its use will be confined to its most common meaning, namely, periodic alcoholic inebriety.

Although the moralist and theologian may assert that inebriety is nothing more than a phase of moral depravity, either inherent or acquired, as a result of willful neglect and gratification of the passions; and while the jurist holding ideas the outcome of the moral theory, assumes that it is a disposition to lawlessness and self-indulgence regardless of order and society, the physician must affirm dipsomania to be a physical condition, the tendency to which is, beyond question, often inherited, but may be acquired: that it is not alone a disease, but in many cases a modified or pronounced form of insanity and a degeneration of the brain with the same distinct causes, development, and progress as have other diseases.

The morbid impulse to obtain spirits at all hazards, recurring again and again in a strange cycle-like movement, apparently uninfluenced by circumstances or conditions, is a feature common to all well-defined cases, although individual traits and peculiarities of conduct are developed.

In a certain small proportion of cases, in which the predisposition by heredity is strongly marked, the first indulgence in alcohol may be carried to excess, and a true dipsomania

rapidly develop. As a rule, however, there is a variable period of social drinking when in the company of boon companions, until, under the influence of some violent emotion or upon some unusual occasion, moderation gives way to a debauch. Then a protesting nervous system and a rebellious stomach proclaim in no uncertain language the outrage done, and then follows a short period of complete abstinence.

Moderation becomes more and more difficult, and, as the period of self-restraint is shortened, the interval of sobriety is correspondingly decreased. The apparently normal condition following these drink-storms varies in different subjects from a few weeks to several months, and in rare cases, even years. Almost unconsciously at first, an irritability of the nervous system becomes manifest; uncalled-for fears fill the mind: excitement or depression, unusual and unaccountable, may be exhibited, while intense suspicions, or even delusions, are not infrequent. Anorexia and insomnia add to the already miserable person's state, until, tortured in mind and body by his unseen foe, and knowing that alcohol alone will give prompt and complete relief, some slight exciting cause, such as the sight or odor of spirits, or the nearness of some former drinking resort, conquers his feeble will, and he takes what he often believes will be a single drink: but in so doing, the fuse is lighted and the drink explosion follows.

As before stated, individual characteristics are developed. Even those who were formerly social drinkers may be secretive and guard their condition from their friends most carefully. Some are solitary midnight drinkers, and seek some unusual or obscure resort; others confine themselves to their rooms, supplying themselves, if need be, with spirits at night. In many cases, where a long experience has proved the weakness of the will, plans are formed for the approaching debauch, as complete in detail as those of a great general outlining a campaign. Even those remedies that have been found most effectual in alleviating the after symptoms, will be purchased, sometimes weeks in advance. Men of wealth will purposely

have business interests in distant cities, that they may have a plausible excuse to leave their homes when the period of inebriety is upon them. It is such cases, in which the paroxysms are anticipated and every facility for procuring spirits increased, that lead the non-expert observer to the conclusion that it is nothing more than a deliberate vice.

During the debauch, the amount of alcohol consumed without producing marked symptoms of intoxication is often extraordinary, while food is taken in small quantities, if at all. Acute alcoholism may result, but in many cases, the period of craving ends abruptly, the condition of the nervous system that calls for spirits seemingly having been satisfied. More often, the debauch is limited only by the inability of the stomach to retain either food or drink. Should this condition result before full satisfaction has been obtained, so irresistible is the terrible desire, that drink after drink will be taken, even though almost instantly rejected.

During the period of recovery from a debauch, the dipsomaniac conscientiously avows his firm intention to ever after lead a life of model abstinence. His former fondness for liquor is succeeded by aversion and disgust, while his suffering is so acute and so difficult to bear, that he resorts to the moderate use of any remedy that promises relief.

During the last century, when total abstinence was rare, and men vied with each other in their ability to keep awake while drinking spirits, cases of true dipsomania were comparatively rare, and drunkenness was not marked by the delirium and frenzy so frequently seen in modern times. Doubtless, the more simple lives led by our ancestors, and the purer forms of spirits used by them, will account, in a measure, for the less harmful effects.

Though moral theories still invest the realm of causation in all forms of inebriety, the recent accumulation of scientific facts, relating especially to the periodic type, confirms the opinions held by close observers for more than a century, that alcohol may produce a form of brain and nerve degeneration

resulting in what might be termed a moral anesthesia, and rendering the drink-impulse stronger than any healthy mental faculty or power.

In dipsomania there is a variation in type, as well as conduct, of the nerve-centers and cells. The result of this variation is an automatism requiring a periodic poisoning by alcohol. The alcoholized cells acquire a habit or rhythm which dominates the individual as completely and powerfully as does instinct a migratory bird, which, though tamed, housed, and fed bountifully, will, at the appointed season, migrate if it can, not from necessity of climate, but because of the inherited function of the nerve-cells.

It is not within the limits of this paper to discuss the numerous theories regarding the pathology of this disease. It is needless to say, that all are more or less speculative: while the general pathologic changes resulting from alcohol are too well known to demand consideration. The causes predisposing to this condition, however, are better known. The grouping of the histories of a large number of cases shows hereditary degenerations, transmitted either from intemperate, insane, epileptic, or hysteric ancestors, to be found in fully three-fourths of all cases. Defective nutrition during the period of growth, injuries to the brain, shocks, sunstroke, diseases attended with delirium or a neurotic diathesis also act as exciting causes. Those suffering from mental strain are especially prone to seek relief by indulgence in spirits.

All authorities agree that the number of dipsomaniacs among the great army of the intemperate is increasing at an alarming rate. That the medical profession in the past has failed to scientifically study and treat this disease, can only be explained on the ground that it has not been entirely free from the superstition of moral responsibility. At the present time, however, there exist in nearly all countries societies devoted to the study and cure of inebriates, that have already done much toward solving the many complex questions of a legal, as well as of a medical nature, that present themselves.

In the treatment of inebriety, as in all other new fields in medicine, while scientific physicians are diligently seeking after the truth, a small army of charlatans has appeared, each offering a means or a drug which is claimed to be superior to all others. Adopting the usual tactics of their class, by posing as public benefactors, claiming persecution by a conservative profession and appealing for sympathy to a liberal-minded public, they have not failed in their object — the reaping of a rich pecuniary harvest. One of these has led all others in prominence and magnitude of operations, proclaiming as a specific an agent used as a fetish by empirics since the days of Pliny. It must be admitted that a certain number of inebriates have been restored by each of these methods; almost without exception, however, they have been moderate or social drinkers, the result of unfavorable environment.

The removal of the exciting cause, the psychologic effect of a secret, and what they believe to be a potent, remedy, and the payment of a liberal fee, account fully for the limited success of these means. The great majority of inebriates, and practically all dipsomaniacs, not only relapse under such treatment, but are rendered more incurable and degenerate as a result of the failure. It must be admitted that the treatment of these cases by the family physician has been anything but satisfactory. He has added his warnings and appeals to those of the family, but all in vain; he has secretly administered remedies to cause nausea, hoping to produce a disgust for spirits, or has given narcotics to check the morbid impulse or to relieve the effects of a debauch, which has too often ended in drug-habits. The salts of strychnin, atropin, and potassium, gentian, and numerous other drugs, have been used, but it is doubtful if the physical action of any remedy, unless administered under the most favorable conditions, has any permanent beneficial effect. Intimidation by punishment renders recovery more and more improbable, and eventually destroys the victim. Statistics of station-houses and jails show that more than ninety-five per cent. of periodic

inebriates, punished for the first time by imprisonment, are arrested for the offense continually through life—their judges holding much the same opinion as did Lord Coke nearly three centuries ago, who declared — “ A drunkard who is *voluntarius demon* hath no privilege thereby; but what hurt or ill soever he doeth, his drunkenness doth aggravate it.”

The dipsomaniac is literally a madman, who is often a criminal, and is always dangerous to society; yet he is allowed to persist in destroying himself on the ground of personal liberty, while the law places restrictions upon those suffering from less dangerous types of insanity. It is true that if he commits acts of violence in public, he temporarily forfeits his liberty to the State; but in countless homes, these same acts are committed from day to day, while the law provides no means of escape for his helpless victims.

Many important questions of a medicolegal nature involving the rights of these degenerates must be solved: such as their marriage under the common delusion that the love and sympathy of the wife will bring about a reform, or the legality of business contracts made during the drink-storm, the whole period of which may afterwards be a perfect blank, although the ability to reason, logically may have been apparently normal. The medical profession should recognize the great field for practical work to be done in the way of legal reforms, giving proper protection both to and against these unfortunates, as well as in affecting their cure.

Almost every inebriate appeals for relief, first, to his family physician, whose knowledge of the environment and psychologic conditions influencing his patient's life should enable him to make use of the general therapeutic principles, available and practical, with a greater certainty of a favorable result than could any other. Much can be accomplished in the earlier stages of the disease by the careful study of each case. The exciting cause must be determined, and, as far as possible, removed; while every means should be used to keep the general health to a high standard. When these means

fail and the case becomes chronic, confinement in special hospitals for a period of months or years is the only method that promises permanent restoration.

Dr. Crothers, editor of the *QUARTERLY JOURNAL OF INEBRIETY*, and one of the highest authorities on the subject, advocates asylums conducted on a military industrial system, under the control of the state, and made self-supporting as far as possible: any deficiency to be met by a direct tax upon the liquor-traffic. Quarantined in these asylums, and living a life of military exactness under the care of physicians making use of every hygienic, physical, and mental remedy known, the dipsomaniac is offered the best, and often the only possible means of becoming a temperate and useful member of society.

In the discussion, Dr. L. B. Tuckerman said, there is one fact which it seems to me the general profession has not yet got hold of. The race that has lived long enough in this climate to become thoroughly acclimated, the Indian race, is dipsomaniac, every man, woman, and child. And as families live longer in the climate, and I speak of that matter from somewhat of experience, because my family has been here for 250 years and over: as families live long enough in this climate to get the full effect of the climate, there comes a time in each family when the dividing line is drawn between the dipsomaniac and the sober. One branch of the family remains liquor-using, the dipsomaniac dies out; the other branch of the family becomes totally abstinent and survives. About thirty years ago the German physiologic chemists noted that the ingestion of alcohol regularly between meals changed the regular daily secretion of urea to a critical secretion, the daily amount secreted falling to a minimum, then suddenly rising to a maximum and then declining again, but the total excretion fell considerably below the average normal secretion. The alcohol, then, produces a chronic uremic toxemia by its intoxicating effect on the epithelium of the kidney. In 1840 Laycock called attention to hysteric cases in which there was paroxysmal ischuria, and such cases have been reported, with

at times a vicarious excretion of urea, by intestine, by the stomach, by the skin, and even the nose.

I believe cases of dipsomania have a certain similarity to such hysteric paroxysms. The first symptom of an oncoming attack of dipsomania comes by way of defective excretion of urinary solids. That goes on until there come uremic intoxication, and then comes the craving for liquor, which gives a temporary relief, while it aggravates the condition. The man drinks, and drinks, and keeps on drinking until he vomits continuously, because the stomach refuses to do anything but secrete, and then he has to stop drinking by virtue of necessity.

The successful treatment of delirium tremens, of inebriety, by men like Crothers and others, is directly along the line of promoting elimination by the kidneys and intestines and skin as rapidly as possible. Those men who are making a study of this question are paying less attention to drugs and more to the excretions. They put the patient into a hot bath. They fill him up with hot water. They give him pilocarpin, strophanthus, calomel, and salines. They bring elimination up to the highest possible point, and just as soon as the elimination is complete, as soon as the kidneys and intestines have become active again, this restlessness goes and sleep comes. The moment you get free elimination sleep will come without any drugs whatever. Bleeding sometimes does good in these cases. Lately I have used a twentieth of a grain of strychnin every three hours, and five minims of the tincture of strophanthus with 10 minims of the tincture of capsicum in a pint of hot water every hour. A druggist down town had a friend who was a dipsomaniac, and he was taking "enerasy" (which is fluid extract of lupulin and fluid extract of capsicum, equal parts. I think there is a little atropin with the first bottle). The druggist asked him if it stopped the craving, and he said: "How can a fellow crave anything with his stomach full of hell-fire." There is this advantage in the use of capsicum. Hare has shown that in these conditions a drug which

"scratches" the stomach, as one gentleman suggested, will promote the absorption of other drugs. See also that the bowels move. I have quit using bromids as a routine practice, because I have found that if you get free elimination sleep will take care of itself. If we can teach these men to have this disease treated just as they do a paroxysmal headache, just as they do an oncoming attack of ague or rheumatism, you can get them to go a good deal longer between attacks, and you will get them as near cured as they ever can be.

Dr. W. E. Wirt: Some years ago in England a commission was appointed to observe the effect of alcohol on the length of life. They stated that the excessive drinker was the shortest-lived of those they observed. Next to the excessive drinker was the total abstainer. His life was the next shortest, and the length of the life of the light drinker was the greatest. They attempted to explain this by saying that the total abstainer was of such constitution that he could not drink. He was usually of a delicate and weaker constitution and was unable to stand alcohol.

Dr. M. J. Parke: In regard to Dr. Tuckerman's theory of urea, I can accept it as applying only in a limited number of cases. A man may revisit a scene of former dissipation and the environment that the thoughts recalled by his surroundings will bring about a debauch, often when it is the least expected. I recall one dipsomaniac in particular, who was restored to health as a result of confinement in a special asylum and for several years lived a life of sobriety. He was at a banquet where wine was served and thoughtlessly raised a glass of wine to his lips. The effect was that he went upon a debauch which lasted three weeks. This occurred seven years ago, and he has since been a confirmed periodic drinker, his periods occurring about every three months. It certainly could not have been urea in that man's case.

As to Dr. Friedman's examples of longevity among the intemperate, it certainly is the exception, not the rule. We all know that life insurance companies are very careful in this

matter. The confirmed dipsomaniac, when his periods occur as often as every six weeks or two months, has a very limited life period. If he does not meet with sudden death he develops epilepsy, cirrhosis of the liver, and different brain and nerve-degenerations that end his life in a very few years.

INEBRIETY IN WOMEN.

Inebriety from a fondness for alcohol for its own sake — vicious indulgence — is far less frequent in women than in men, and well that it is so. Drunkenness is bad enough in a man, but in a woman it is even more pitiable, and, if it be possible, more far-reaching and more dreadful in its results. With women it would, we think, be safe to say that the origin of the drink habit lies in perturbed physical conditions — in fact, that it is a disease, and not a mere moral obliquity, as many would have us believe. The consequences of alcoholism in women are not so quickly evident as in men. In the earlier stages of inebriety in those cases in which there is power of volition, a peculiar shrinking from publicity protects some women against the symptoms noted among men at a like period. Two causes may be given for the lapse of women into inebriety. First is the nervous condition due to lack of nutrition and the wear and worry of domestic life and the demands of society — an exhaustion for which relief is mistakenly sought in the transient aid of alcohol; secondly, the pain and unrest incident to disorders of their sex, for which solace is sought in the anæsthetic and paralyzing effects of alcohol. In the first case, the woman who flies to drink must be unaware or unmindful of the fact that its taking involves a great risk of creating a morbid condition that often finds expression in constant inebriety. In the second case, the so-called solace, with startling and sorrowful frequency, ends in confirmed alcoholism. — *Temperance Record*.

THE MORPHINE HABIT.

BY WILLIAM F. WAUGH, M.D.,

Professor of Practice, Ill. Med. Coll., Chicago.

Can the morphine habit be cured at the patient's house? Yes, provided the doctor has the three prime requisites at his command: (1) Complete control of the patient's supply of morphine; (2) the patient gives up all work and devotes himself exclusively to the business of throwing off the habit; (3) the physician has the necessary means and appliances to relieve suffering and the skill to use them properly.

Without these the most skillful specialist will fail in any but the easiest cases. And let me say that the asserted painless cures one reads about in the advertising circular are either lies, pure and simple, or they are cures of the easy cases, hardly deserving of the name of "habit." Nevertheless, we must not expect the patient to admit that his was an easy case. Nothing affronts a man more deeply than to intimate that his own case has not been peculiarly difficult or his suffering phenomenally excruciating. But when one has conducted hundreds of men and women through the ordeal of breaking off drug-habits, he learns to estimate pretty accurately the relative amount of suffering of each, the silent endurance of one of nature's noblemen, and the eloquent exaggeration of the most trifling discomfort on the part of the morphine-hungry party, who thinks she will get her drug if she only makes fuss enough.

The specialists who have devoted their lives to the treatment of this disease, narcomania, agree in affirming that no confirmed habitue can free himself without a struggle, and devote their energies to reducing the unavoidable suffering to a minimum, making the ordeal as short and as easy as possible. Regnier, Erlenmeyer, and Crothers, men whose names are known all over the world for their scientific work in this department, all recognize the truth so well expressed by Hare,

that "when a patient goes through the withdrawal without suffering, you need not flatter yourself that it is on account of your treatment; it is because he has a secret supply of his drug."

Compare these statements with those of the advertising community and it will be seen how far these unknown, often illiterate individuals are ahead of the scientific specialists. The advertisers cure their patients at the latter's homes, without detention from business; the cure is easy and painless; the patient never knows when the morphine is withdrawn, so imperceptibly is it accomplished. Any case can be cured in periods varying from three weeks down to fifteen minutes.

That these miraculous powers should be denied to the educated man of science and lodged in the hands of these persons would seem remarkable, were it not that we know that these gentlemen are not in business for their health, and that, viewing the matter from a strictly commercial standpoint, it has a different aspect than when looked upon from the purely scientific point of view.

Do not imagine that I believe no good can come out of such sources. There is some chance of a quack discovering a good thing, as well as any one else. The only question is as to whether he really has done so, or merely claims this credit, which is a very different thing. I have taken pains to investigate all these claims which came within my cognizance, and these are some of the results of my investigations:

A doctor wrote me of a popular "home treatment," saying he had known of its success, and had analyzed samples sent at his request, and found no morphine in them. By my advice, he obtained a sample from a patient who was under treatment by it, and in this I found abundance of morphine. The remedy for the morphine habit was morphine, and the method contemplated a gradual reduction of the dose until it was entirely withdrawn. I have met a number of persons who had tried this method, and their testimony has invariably been that they could reduce the dose to a certain point, when the

symptoms of withdrawal began, and then they had to increase the dose or add an opiate. The withdrawal symptoms will show up whenever the cells have been drained of morphine, no matter how slowly it is done.

Another party stupefies his patient with chloral, keeps him thus for some weeks, and then sends him home with the assurance that he is cured. When the chloral has been eliminated, the withdrawal symptoms appear in full force, and the victim has the whole struggle before him, just as if he had simply stopped short, only that he is poorer by the sums paid for his "cure."

A third variation of the miracle-cure is to get the patient off the morphine and upon alcohol, cocaine, cannabis, or codeine. Of these drugs alcohol is known to every one, and whether it or morphine is the worse as a habit-drug my readers are as able as I to judge. Cocaine is the most disastrous in its effects on the human brain of any habit-drug I have ever heard of. Between it and morphine there is no question as to the choice. Cannabis is possibly less injurious than the opiates. But as yet no observations upon its effects, immediate and remote, upon numerous individuals, have been made public. My own experience has been that every case, after using the cannabis for a time, went back to the morphine. The same thing is true of codeine. The use of these two drugs keeps up the appetite for, and habit of reliance upon, a narcotic drug, and keeps the door open for the return of the arch-fiend morphine.

There is one method of the advertisers that has real value — the elimination system. By this they guarantee to cure any case of opiate addiction in forty-eight hours. The patient is given emetics and cathartics until the bowel is completely emptied, the "residual bile" and the morphine stored up in the tissues are discharged. If thoroughly done, the urine will not respond to the test for morphine. The withdrawal symptoms come on at once, and if the patient has the nerve to bear them for a limited time, crisis occurs, and he is free.

This method, then, is Lewinstein's abrupt withdrawal, with the great improvement of the thorough evacuation and rapid elimination. It is suitable for young and strong patients, with sound heart and good will-power, who have not taken the drug very long or in large doses. With the ordinary habitué there are the grave dangers of collapse, inflammation of the bowels and a sudden stoppage of the activity of one or other of the vital organs, long accustomed to perform its functions only under the influence of the drug. These dangers are reduced greatly if the patient is under the constant surveillance of his physician, and the latter has the requisite skill and experience in the treatment of drug-cases; but still it is a method suitable only for selected cases, and not by any means generally applicable.

Having thus cleared the ground, we are prepared to consider: (1) What is the pathological condition present? (2) What is the best mode of treatment? (3) What results are to be expected from treatment?

The 34th annual report of the commissioners of public charities and correction for the city of New York gives the reports of all city institutions under the board's control for the year 1893. It is the last report of the commissioners that has been printed. The statistical data, giving the cost of liquors consumed and the death-rate of the various hospitals under its control, indicate a startling relationship between the cost of liquors used and the percentage of deaths. The table given below is compiled from this report.

Hospital.	Number of Patients.	Cost of Liquors.	Deaths.	Cost of Liquors Per Patient.	Percentage of Deaths.
Fordham.	383	\$274.38	44	\$.72	11.49
Gouverneur.	3,025	124.09	279	.41	9.22
Bellevue.	16,141	2,969.75	1,592	.18	9.86
Harlem.	2,842	256.53	130	.12	4.87
City.	8,075	824.62	675	.16	8.35
Ward Island.	6,529	338.83	399	.05	6.11

ACUTE CHLORAL DEMENTIA SIMULATING
PARETIC DEMENTIA.*

BY HARRY WALDO COE, M.D.,

In charge Mindsease Sanitarium, Portland, Oregon.

Drugs play an important role in the pathogenesis of mental states, and the clinical picture presented by these varying conditions is often puzzling and difficult to analyze. Chloral is infrequently employed by drug *habitueés*, and its symptoms are often misinterpreted with consequent erroneous diagnosis and prognosis. These often involve the rights of the patient.

The basic principles of paretic dementia are well known and are in the initial stages more or less pronounced ataxia, delusions of a grandiose type, fibrillary or general tremor, hyperhidrosis, and pupillary inequality. Evidences of dementia are found which later become pronounced. Not infrequently insomnia is a prominent symptom early in the affection. A patient coming under observation suffering from such symptoms is naturally classed as a paretic. In some of these cases it is found that chloral has been used for obtaining sleep for weeks before the patient comes under observation. The prompt withdrawal of the drug is often followed by a disappearance of the symptoms and the restoration of the patient to mental health. The asylum records of this country show a considerable number of incorrectly diagnosticated cases of acute chloral dementia in which a short residence in the asylum has resulted in a cure, and the patients were discharged with the stigma attached to them of having been committed to an insane asylum, an error that might have been avoided by a correct appreciation of the etiology of these symptoms.

It would seem wise to keep cases in which hypnotics have been employed under observation a sufficient length of time

* Read before the Washington State Medical Society, May 12, 1898.

to learn if perchance it may not be a case of drug-habit insanity. The fact that even learned alienists may be mistaken in the diagnosis of these cases emphasizes the necessity of the ordinary practitioner exercising great caution in their commitment.

Two cases have recently come under my care which emphasize what has already been said upon this subject.

A lady, aged 56, married, of good family and without hereditary taint, who had been ill during the past five years, had delusions, transitory in character, of a grandiose form, some months previous to the time of coming under the observation of a most excellent family physician. Ataxia was marked, especially in the lower limbs. General tremor was present, and the tongue could scarcely be extended, so marked was the trembling of that organ. There was pupillary inequality and the speech was tremulous. Insomnia was marked, and for this and the shifting pains in the back and limbs a well known proprietary article, the chief constituent of which is hydrate of chloral, had been employed in moderate quantities for about a year and a half. Recently this amount had been increased, yet the total amount taken did not exceed on an average twenty grains of chloral daily. A few days before the patient came under my care she had become somewhat violent at times, and delusions of persecution had led her to become demonstrative and difficult to manage at home, and the attending physician called in as a consultant a gentleman of large experience with the insane. The prognosis was gloomy; so bad, in fact, that the advice of the physicians that private treatment and restraint should first be employed for the purpose of clearing up the diagnosis would have been disregarded had it not been for the kindly interest of a friend outside of the family, and the patient would have been consigned to the State Asylum for the Insane. Upon coming under my care I declined to make a diagnosis. The symptoms seemed to point to parietic dementia or some chronic de-

mentia of a hopeless character. It did not seem possible that the drug employed could be the cause of the diseased condition, the amount being so small, and had not my attention been previously attracted to the subject of chloralism I fear I should not have considered it.

All hypnotics were discontinued, and in a few days her delusions began to wane and her general nervous state to improve. Tremors lessened, speech sharpened, and the pupils reacted equally. In two weeks sleep became fairly good, although not normal. Six weeks after coming under my care she went home and resumed the management of her estate.

The second case was a man aged 57, by occupation a sea-captain, and married. Mental alienation had been noticed by friends and ship-fellows for some months, finally resulting in delusions of mixed character, and to such an extent that the command of the ship was taken by the mate while at sea. The patient was placed in a hospital in Portland upon the arrival of the vessel at that port. As the man's delusions were of a seemingly harmless character, he was allowed to remain in the hospital three weeks. Finally, becoming somewhat demonstrative and at times noisy, the hospital authorities declined to keep him longer, and arrangements were made with me to give him separate care. The symptoms were much like those of the first case, except that the general mental break-down seemed more pronounced. The diagnosis of parietic dementia had been made, and was quite natural under the circumstances. The arrangements made with me did not look to a cure, but merely to have the patient in a safe and pleasant place while awaiting the arrival of relatives from England. The patient had been a chloral-taker. He had taken, as he said, "tons of the stuff," and while in the hospital either that drug, sulphonal, or other hypnotics were employed in the endeavor to restrain the nervous excitement for the time being.

Under a strong suspicion that the case was only a chloral habituation, all hypnotics and alcoholics were promptly withdrawn. The patient was a most distressing one to care for.

Four weeks later the captain was once more his own self, and was able to take a trip across the continent and ocean to his old home in London. The case proved to be one of acute chloral dementia and not paresis. — *Medicine*.

MORPHINE CRYSTALS IN THE BLOOD.

Dr. Fuller, the pathologist of the Westborough, Mass., Insane Asylum, in the last report, makes the following statement of some observations on morphine cases:

Perhaps the most interesting were five cases addicted to the morphine habit, and one case in which the patient took the crude opium by mouth. Two cases on admission were taking 25 grains each per diem, one case 90 grains per diem, with 30 grains of cocaine to antidote the effect, one 6 grains, and one 8 grains. There was marked anaemia in all the cases, the erythrocytes and hæmoglobin greatly reduced. The first two cases came under observation in July, 1897, the others were admitted early in the present hospital year. While making the count of the red cells, several needle-like crystals were observed, 30 μ to 60 μ (micro-millimeter) in length, tapering to a point at one end and the other broken off or jagged. Some had their ends squarely cut, the former variety, however, being the type. They were colorless and highly refractive. The greatest number were observed in the cases taking 25 grains per day, and were observed respectively in the blood diluted 1-50, 1-100, and 1-200. When first seen they were thought to be due to the diluting solution (Gowers being used); a fresh solution of the same was then made, and still the crystals were noted. Blood from cases not morphine-takers were examined with the two solutions and did not show them. In examinations of specimens of blood from the morphine cases diluted with distilled water, hydrant water, one-third per cent. acetic acid in distilled water, they could not be demonstrated. Samples of undiluted fresh blood failed

to show them, as well as stained and unstained cover slip preparations.

Another morphine case, who was admitted at the same time, when examined a day later gave the same results as to the crystals. In the second case the drug was immediately cut off, and the crystals were observed ten days later, after which time I failed to observe them. In the first case, where the drug was gradually decreased, when the patient was taking less than three grains per diem I could not demonstrate them. The second case was readmitted to the hospital during the present year, at which time was taking eight grains per diem, and they were readily observed. Was immediately cut off, and five days later could not demonstrate them. All the others admitted in the present hospital year showed similar crystals when diluted with Gowers solution, but would disappear with cessation of administration of the drug in three to seven days. The case taking 90 grains per diem with 30 grains cocaine showed fewer crystals in number, but they were much larger, and, though the drug was not immediately stopped, it was decreased 90 per cent. The crystals were observed only on the first examination. To what extent the cocaine influenced them I am not able to offer an opinion. The case who took the crude opium by mouth, although she had been taking the drug for twenty years, at no time in my examinations showed them. The other cases took the morphine hypodermatically. Case 2, referred to above, on second admission, however, was taking the drug by mouth, but readily showed them on first examination one day after admission.

I have inferred that these colorless, needle-like crystals, closely resembling the finer crystals of morphia sulphate, have some connection with that drug when taken into the system, and that there must be some chemical action between the blood of cases taking morphia sulphate and the Gowers solution to cause their formation. I have already called your attention to the fact that in undiluted specimens, and in specimens diluted with water, distilled water, one-third per

cent. acetic acid in distilled water, and in dried smears, stained and unstained, I could not demonstrate them.

Through the interest taken in the matter by Dr. J. P. Sutherland, registrar of the Boston University School of Medicine, and Dr. J. W. Rockwell, professor of physiology in the same school, there have been conducted in the physiological laboratory of the University, under the direction of Professor Rockwell, a series of experiments on five pairs of rabbits. One pair were used as checks, and to the other pairs, in varying doses, morphine was given. At the expiration of six weeks the highest pair were receiving 17 grains per diem, but before this point was reached, in a pair taking 8 grains per diem, crystals resembling those observed in the laboratory here were observed, the checks at no time showing them.

HEREDITY AS A CAUSE OF ALCOHOLISM.

That heredity is a cause of alcoholism and that alcoholism is a disease are becoming quite apparent.

We are reminded every day of the proverb in the good book, that "the sins of the parents are visited upon their children to the third and fourth generations," this has been proven to be a fact in the hereditary effects of alcohol upon the system.

The person whose brain and nervous system have been injured, and whose moral and will power have been weakened, and whose stomach, liver, and other organs have become deranged by the use of alcohol will transmit some of these derangements to his offspring.

The modern study of alcohol has proven without a doubt that it is not a stimulant or a tonic, but an anæsthetic and a narcotic, and it has also been proven that it is a remedy of but little therapeutic value and could be dispensed with, even for medicinal purposes, with universal benefit to mankind. The transmissibility of an alcoholic inheritance has been very generally admitted by many writers, among whom are Aristotle,

Darwin, Rush, Morel, Carpenter, Richardson, Thompson, and Forel.

The actual number of cases in which an ancestral history has been traced is probably much below the actual amount, as it is difficult to get relatives to admit the existence of an alcoholic taint, but it has been proven that the proportion of hereditary cases have increased five per cent. over the acquired during the past twelve or fifteen years. Norman Kerr found in over 3,000 cases of alcoholism fully one-half with an inherited ancestry, and about the same proportion has been the experience of others, who have studied the subject. Piper puts the proportion of hereditary to acquired cases as two to one.

Hereditary craving for strong drink can be transmitted by parents who have not that craving, but who drink very moderately and only by custom or sociability. As more light is thrown upon the therapeutic action of alcohol this customary drinking will gradually be abandoned, in fact, it is becoming less customary at the present time. There has never been a time in America when every indication pointed so strongly to a decrease of intemperance as at present, and there has never been such a tendency toward moderation in quarters where alcoholic indulgences are general.

In conclusion we would ask if one of the principal causes of inebriety is heredity, how is this form of inebriety to be cured and our future generation saved? There is but one answer, and that is, to stop the drink habit at once, and as it has been proven by medical men that alcohol is not a food, and that it does not promote digestion, and that it does cause gastric disturbances, and that it does not increase muscular strength nor promote physical or mental endurance, and it is not a tonic or a stimulant, therefore we believe medical men ought to do all in their power to prevent its universal use as a beverage in social and political life. — Editorial in *Charlotte Medical Journal*.

STRYCHNINE.

By H. C. Wood, M.D., LL.D.

It is a curious fact that strychnine certainly was until very lately, and probably is still, almost altogether manufactured in the United States; this growing out of the circumstance that the amount of strychnine used in the practice of medicine is a mere bagatelle compared with that which is employed upon the American frontier for the destruction of wild animals. Strychnine may therefore be considered an especially American drug, and it is fitting that the increasing recognition of its value in medicine which has come of late years should be largely of American origin. In this article I want to discuss briefly the dose that should be used of the drug; for unless it be alcohol there is scarcely any other drug whose proper doses vary so much.

Very commonly strychnine is given in too small doses to produce the effect it is capable of. One-sixtieth or one-fortieth grain of the alkaloid is of very little value even as a simple tonic, except in persons of abnormal susceptibility. I have habitually given, for many years, the tonic dose as one-twentieth grain three times a day, and have never seen a case in which it produced anything like serious symptoms. In nervous females such doses will sometimes cause increased nervousness, or perhaps sleeplessness. In a very few cases that I have met with, as an idiosyncrasy even the smallest doses of strychnine cause vomiting. Very frequently it is better in the use of the drug to give none of it after 3 or 4 o'clock in the afternoon, and then secure the patient from wakeful nights.

As a general and respiratory stimulant strychnine is very valuable in acute pulmonic diseases, but here in order to be effective it should be given in full dose at short intervals. One-twentieth of a grain hypodermically, every four hours, in a pneumonia or in a low fever, is only moderate dosing, and

especially do the old bear strychnine well. Their nerve centers are evidently so hardened by the vicissitudes of years that they are only to be affected by inordinate stimulation.

A rare condition in which strychnine has seemed to me to act almost as specifically as quinine does in intermittent fevers, is that form of subacute lead-poisoning in which the symptoms closely resemble those of acute poliomyelitis; differing from them, however, in that they occur in the adult; that they involve almost the whole body, and that they attack the sphincters as well as the muscles of voluntary life. An almost universal paralysis with rapid wasting of the muscles, appearance of reaction of degeneration, and involvement of the sphincters, constitute the series of manifestations of the cases under discussion.

Another condition in which strychnine is often of the greatest service is chronic alcoholism, and especially in those forms of chronic alcoholism in which the mental symptoms are pronounced and take upon themselves not the shape of a delirium tremens, but of a maniacal dementia; although in delirium tremens strychnine is often of the greatest service.

Then, again, there are certain cases of organic heart disease in which, in some way at present inexplicable, strychnine is of immense service. I have never been able to determine certainly from the symptoms of a cardiac case whether it was or was not one to be especially benefited by massive doses of strychnine, neither in a discoverable lesion, nor yet in the symptoms themselves. But although abnormal slowness of beat does seem to be a distinct indication for the use of strychnine, only by the therapeutic test does it seem to be possible to decide the relations of any individual case to the alkaloid.

In all cases spoken of in the last paragraph it is essential to give the strychnine to the point of physiological toleration, or, rather, non-toleration. Twenty-five years ago I was in consultation in a case in which the feebleness and exhaustion following an acute pulmonic attack seemed utterly unconquerable. After the thing had been going on for some weeks,

owing to a misunderstanding between the nurse and the physician, four doses of strychnine were given at one time and repeated in four or five hours. Shortly after these doses violent convulsions came on, not severe enough to urgently threaten the life of the patient, but to alarm everyone greatly. The next day the patient was practically convalescent; the exhaustion and symptoms which had dragged on for weeks, under the administration of the ordinary therapeutic dose of the drug and of other tonics, nursing, stimulants, etc., was practically put an end to at once by the toxic dose of the strychnine.

As illustrative of the matter under discussion, I may mention two cases which have occurred in my practice during the past spring. One was the case of a saloon-keeper, who was brought to the University Hospital from another hospital, where he had been treated for six to eight weeks for alcoholic insanity or dementia; the man's physical condition was that of chronic alcoholism, while mentally he was a jabbering idiot, giving no evidence of knowing where or who he was, talking incessantly and irrationally. He was put in bed, where he was kept by the nurses during the day and by straps at night, and the order given to the Resident to administer strychnine at intervals of six hours, hypodermically, increasing as rapidly as it could be done. This treatment was very earnestly and very boldly carried out by the doctor: within two weeks the man was taking three-quarters of a grain of strychnine a day hypodermically, was rational, and practically convalescent.

The second case was seen in consultation in private practice. Mr. ——— was a man of about 64 years of age, suffering from mitral insufficiency, of which the origin was in an obscure and distant past. The valvular lesion was, however, known to have existed for twelve years, and probably went back nearly thirty years to an acute attack of rheumatism. The patient had paid no attention to himself until about five months before I saw him, when he had a sudden anginose attack so severe that he lost consciousness and was pronounced

by his physician dead. From that time on he had had at short intervals severe attacks of heart failure, not attended with much pain, but with excessive weakness and breathlessness, and a badly failing, very slow pulse, the rate usually being about 50. When I first saw him he was in bed, where he had been for weeks, unable to feed himself without bringing on an attack: life being maintained apparently only by the most rigid quiet. The cardiac murmur was distinct: the diagnosis absolute, except that there was some doubt whether there was, in addition to the insufficiency, also stenosis. The impulse was exceedingly weak, the pulse very irregular and feeble. Digitalis and strophanthus both had been tried. The digitalis treatment, however, was thoroughly re-tried, the drug being given at various times in small and in enormous doses, in every form and method of administration, and always doing harm rather than good. Strophanthus was then tried, and, while it seemed to suit the patient a little better than did digitalis, accomplished nothing. The patient was then put upon strychnine, which was rapidly increased and given both by the mouth and hypodermically. At one time Mr. ——— was violently tetanized, owing to the nurse unwittingly giving a hypodermic injection a few minutes after his wife had administered a dose of the strychnine by the mouth; but the symptoms readily yielded to remedies and the paroxysm seemed to do good rather than harm. During many weeks the object of the treatment was the keeping up of a perpetual chronic poisoning by strychnine. After Mr. ——— had so much improved that it was considered safe to allow the professional nurse to leave, the strychnine was given by the mouth, under the supervision of his wife.

A solution was made, one minim of which represented one-sixtieth of a grain of the alkaloid, and for weeks together eight minims of this solution were taken six times in the twenty-four hours, that is, during the twenty-four hours forty-eight-sixtieths ($\frac{4}{5}$ ths) of a grain of strychnine were given by the mouth. Almost the whole time there was pronounced

rigidity of the back and limbs, with markedly excited reflexes. The patient did not seem to become accustomed to the use of the drug, and after some weeks this condition of rigidity was so irksome that the dose was reduced to half a grain of strychnine a day. From the very beginning of the strychnine treatment the effect upon the circulation was very pronounced, and now Mr. ———, who before the treatment had been unable to turn himself in bed without bringing on an attack, gets up, dresses himself, goes about the house and up and down stairs at will, moves his chair from one side of the room to the other, and lives a comfortable though still semi-invalid life. His pulse is fairly regular and strong, and for several months there has been no attack of cardiac failure.

Whenever strychnine is being pushed very rapidly and actively it should be given hypodermically. The maximum effect of such a dose is probably felt in about twenty minutes after its administration, and its influence probably lasts six hours, although it may be considered to be nearly gone at the end of four hours. — *Amer. Medico-Surg. Bulletin.*

INEBRIETY FROM TRAUMATISM.

The following case is mentioned by Dr. Tuckerman of Cleveland in a valuable paper on Craniotomy for Traumatic Psychosis, read before the Medico-Legal Section of Cayuhoga County Medical Society.

A gentleman, aged 48, an exemplary husband and father, and a man of excellent reputation in the community for integrity and sobriety, was kicked upon the forehead by a mule. There was produced a depression of the frontal bone in the median line just at the margin of the hairy scalp. The man was unconscious but a few moments, exhibited no symptoms of cerebral compression, and in a short time was able to be about his business. It soon became apparent, however, that his

character was totally changed. He deserted his wife and sought the companionship of prostitutes. He became abusive to his children when at home, so that they would flee from him in terror. Hitherto a strict abstainer from the use of intoxicating liquors, he developed such a taste for whisky and became so addicted to its use that he wasted his property and became a drunken sot, profane, vulgar, obscene, lost to all sense of decency and manhood. This condition, interrupted by occasional promises of and feeble attempts at "reform," continued for over three years. Finally, after a long debauch, suicidal and homicidal impulses became prominent, and the relatives consented to operation. Upon removing the depressed bone a large fragment of the vitreous plate was found projecting through the dura for an inch or more into the frontal lobes. The superior longitudinal sinus was crushed and filled with organized blood-clot, and the middle frontal convolutions showed signs of pressure, but not of decided degeneration. The operation was followed by but little shock and no inflammation. Constant restlessness was succeeded by marked quietness. The countenance became more serene, the voice less coarse. As convalescence progressed, he greeted his wife and children pleasantly instead of with scowls and curses as heretofore, and as recovery went on it was evident that he had become his old self again, gentle, affectionate, trustworthy, remaining so when last observed — two years after the operation. (This case was operated by Dr. Emory Lanphear of St. Louis.)

From six to ten per cent. of all soldiers in the United States army are treated yearly for inebriety. This, in times of peace and in forts and garrisons. Of this number, three and a half per cent. die from the effects of spirits. These are said to be minimum statistics and far below the actual number treated and dying. These facts reflect on the intelligence of the authorities, and call for a change.

NOTES ON SOME ANATOMIC CHANGES IN THE
BRAIN-CELLS IN ACUTE ALCOHOLISM.

Dr. Charles L. Dana read a paper before the New York Neurological Society with this title, reporting ten cases, and the results of his studies in this direction during the past two years. He had used Nissl's stain for the most part. He stated that what was ordinarily known as acute alcoholic meningitis could not be said to be a meningitis at all, although, clinically, these patients died with all the symptoms of meningitis. The autopsy reveals simple congestion and edema of the brain, and even the microscope but rarely shows any migration of leucocytes or anything approaching encephalitis. In some cases, not even vascular activity will be observed. Alcoholic meningitis is not primarily a vascular disorder, but a slow poisoning; hence, we must study the cell to determine the changes produced. It has been stated by some investigators that all forms of cell degeneration are the same, and that it is impossible, as Nissl claimed, to make out different cell degenerations in accordance with the particular pathologic irritant. Whether this is so, or not, certainly the microscopic appearances are different in different cases of alcoholic meningitis, and in other cases associated with delirium and acute disorder prior to death. There is one type of degeneration quite characteristic of those dying from sunstroke, with intense delirium and very high fever. It consists in a distinct and general pigmentation, involving the larger cells. This sudden development of pigmentary degeneration would seem to be characteristic of acute febrile degeneration, associated with acute toxemia. Another kind of pigmentary cell degeneration was found in a case of pericious anemia. Here, the pigmentation involved both the small and large cells. In a case of prolonged use of morphine and whisky, in which death was due to exhaustion and malnutrition, the brain showed quite a general atrophy of both the nuclei and the cell bodies. There are three types of cell degeneration, viz.: (1) Intense pig-

mentation of the larger cells, chiefly with degeneration of the cytoplasm; (2) a general cell atrophy of the body and nucleus; and (3) a good deal of change in the cell-body, with many neuroglia nuclei in the pericellular spaces. In the cases of alcoholism and alcoholic meningitis, it was not possible to make out a distinct type of cell degeneration, nor could this be expected, as these patients die not so much from the alcohol as from autotoxemias, and from the febrile process. — *Medical News.*

POISONING FROM WOOD ALCOHOL.

At the regular meeting of the Nashville Academy of Medicine March, 17th ult., T. Hilliard Wood, M.D., Professor of Diseases of Eye, Ear, and Throat, Medical Department University of Tennessee, reported the case of a lawyer, æt. 27, a periodical drinker, but lived in a prohibition town. His physician had given him a prescription for bay rum f ʒ j., alcohol f ʒ iv., which he was in the habit of having refilled from time to time. The last time the druggist dispensed bay rum f ʒ j., instead of f ʒ j., stating that it had been made with wood alcohol. Within the next few days after drinking it, his vision became greatly impaired, resulting in five days in total blindness. Pupils dilated, but would respond to light. Peripheral vision not gone, but very slight. Ophthalmoscope showed nothing abnormal. Diagnosis: paralysis of center of vision in occipital lobe. Patient was put on strychnia and bitter tonics, and ordered Russian baths, which was followed by gradual improvement, and vision was much better.

Dr. Paul F. Eve thought the diagnosis certainly correct and that the trouble was most probably caused by the wood alcohol.

Dr. Deering J. Roberts said that *wood* alcohol was the cause unquestionably, and that *Wood* treatment would certainly relieve him. He stated that of the three principal forms of alcohol, while all were hydro-carbons with the addi-

tion of water, their chemical composition varied materially. Ethyl alcohol, C_2H_5OH , made from fermented grains and sugars, and found in brandy, whisky, etc., was the only one for use either as a beverage or in the composition of drugs, such as tinctures, etc., to be taken internally, or introduced into the circulation. Amyl alcohol $C_5H_{11}OH$ — potato-spirit or fusel oil — sometimes found combined with ethyl alcohol (and distillers endeavor to get rid of it simply ageing the combination by which the fusel oil was eliminated). You will be very apt to find "moonshine," warm from the still, quite rich with it.

Methyl alcohol — wood-spirit — CH_3OH , should not be called an alcohol, and was only fit for combustion in lamps or as a solvent in the mechanic arts. It should be rigidly excluded from the manufacture of any medicine used internally.

At the meeting of the Academy March 31st, Dr. Wood made a farther report of the case, stating that the patient had entirely recovered and had returned to his home.—*Southern Practitioner*.

ALCOHOLIC SOMNAMBULISM.

Dr. Francotte, of Liège, has published a carefully prepared paper, having special reference to the medico-legal relations of the somnambulism which is met with as a result of alcoholism. Somnambulism, regarded as the condition in which, during loss of consciousness, co-ordinated actions are carried out, of which there is no recollection afterward, is met with not only in hysteria, epilepsy, and the hypnotic state, but also as a result of alcoholic indulgence. The author relates the following case of a man who was arrested for disorderly conduct in a public place. He could not be induced to answer questions or even to speak, and appeared to be quite demented. There was no sign of intoxication, but next morning at the medical examination, he confessed that at a place

far distant from that at which he had been arrested, he had imbibed a large quantity of alcohol. He had completely lost recollection of what had occurred during the next forty-eight hours. He confessed to other excesses in alcohol, and there was marked tremor of the hands and of the tongue. A sister had been the subject of mental disease. The author, after citing several examples, concludes that there is a species of alcoholic somnambulism in which the patient behaves to all appearance in a normal way, but without consciousness, or at least without having any recollection of what he has done. In reality, however, during such a time, certain slight peculiarities of conduct are present which may easily escape the observer. The condition manifests itself only in degenerate individuals, or at least in those who have inherited some psychic weakness, and as it is one which implies the absence of responsibility, unless it is intentionally induced, it is of great medico-legal importance. — *Neurologisches Centralblatt.*

Dr. Legrain, physician to the insane asylum in the department of Seine, has made an extended study of alcoholic heredity, from which he formulates the following conclusions: 1. Double parental alcoholism creates an irresistible tendency to drinking in the children. 2. Parental absinthism seems to transmit epilepsy directly to the offspring. 3. The parental combination of absinthe drinking and epilepsy is a common cause of epilepsy in the children.

PERIPHERAL NEURITIS DUE TO HEPATIC INSUFFICIENCY.

Gouget (*Rev. de Méd.*, July, 1897) gives a detailed account of the case of a woman of alcoholic habits, aged 33 years, who died from the effects of hepatic cirrhosis. Two weeks before her death she rapidly developed peripheral neuritis of the arms and legs. The toxic coefficient of the urine, as tested on rabbits, was much above the normal. Death took place from ex-

haustion and delirium. At the necropsy there was fatty cirrhosis of the liver, obsolete tubercle at the apices of both lungs, and sero-fibrinous pleurisy on the left side. Microscopic examination of the peripheral nerves showed degeneration. Although the patient had been addicted to alcoholic excess, it appeared improbable that the neuritis was due to this cause, since she had had no stimulant for the two months previous to the onset of the symptoms. In addition, the simultaneous onset of neuritis in the arms and legs is rare in the alcoholic form. The sero-fibrinous pleurisy could not have given rise to toxic neuritis, and the author concludes that the neuritis was due to hepatic insufficiency. In support of this contention are the facts that the toxic coefficient of the urine was much higher at the time of the onset of neuritis than on her admission to the hospital, and that other signs of hepatic insufficiency, such as repeated epistaxis and progressive somnolence passing into coma, were also present.

CAUSES OF SUDDEN DEATH FROM ALCOHOLISM.

Alcoholism is more frequently the cause of sudden death than is reported, because some do not want the stigma in the family recorded, and because they die of alcoholism some are refused burial in consecrated ground. It may cause death by producing a congestion of all the principal organs of the body, with no appreciable lesion in any.

A middle-aged gentleman of this city, of fine physique, carrying over \$100,000 life insurance, died suddenly one morning while dressing. Autopsy showed considerable congestion of the brain, lungs, liver, kidneys, stomach, and slight atheroma of the aorta. A chemical examination of the contents of the stomach revealed no poison and the death certificate was filed, giving as the cause of death no appreciable lesion sufficient to produce death. It was afterward learned that he was a very hard drinker, but not becoming intoxicated

easily it was not known to many of his friends. The evening preceding his death he used alcoholic beverages freely. Nervous inhibition is the only way to account for some deaths from alcoholism.

Alcoholism produces more sudden deaths, including accidents, than any other disease, and would when treated greatly reduce the death-rate from suicide. — *Dr. Dunham in Buffalo Medical Journal.*

THE ANNUAL INDIVIDUAL CONSUMPTION OF ALCOHOL IN VARIOUS COUNTRIES.

Debove, according to the *Lyon médical* for December 4th, computes the average consumption by the individual (man, woman, and child) as follows. France, 14 pints; Belgium, 10.5 pints; Germany, 10.5 pints; British Isles, 9.25 pints; Switzerland, 8.75 pints; Italy, 6.60 pints; Holland, 6.25 pints; United States, 6.10 pints; Sweden, 4.50 pints; Norway, 3 pints; Canada, 2 pints.

ALCOHOL IN BABY'S STOMACH.

It requires no argument to convince any one that the drunkard injures his intellect and ruins his nerves by every fit of drunken delirium and stupor, but it is not so easy to make the mother understand that she is damaging her infant's brain by a similar kind of toxic excitement when it lies in a stupor from the effects of an improper meal of food which has undergone decomposition in the stomach. It is bad to put poisons already formed into the stomach, as does the inebriate, but it is even worse to turn the stomach into a poison factory by filling it with unsuitable food, which it cannot digest, and which, by spoiling, forms alcohol and many other nerve poisons. — Kate Lindsay, M.D., in *Good Health*, December.

THE DIFFERENTIAL DIAGNOSIS BETWEEN MENTAL ABERRATION FROM INDULGENCE IN SPIRITUOUS LIQUORS AND CEREBRAL DISTURBANCE AND CONFUSION OF THOUGHT FROM BEING STRUCK BY A TROLLEY CAR.

STEINERT "SEEMED DAZED."

Arrested for intoxication after being struck by a trolley car.

Louis Steinert, a court stenographer, living at 241 East Fifty-third street, Manhattan, spent last night in a Flatbush police station. His crime was, according to the policemen who arrested him, that he "seemed dazed" after being knocked down and rolled twenty-five feet by a trolley car.

Mr. Steinert, whose card indicates that he is a stenographer in the Municipal Court of the Borough of Queens, was riding a bicycle in Fort Hamilton avenue. According to witnesses, he was riding rapidly and steadily and had perfect command of his wheel. He turned into Flatbush avenue, and as he did so was struck by a car of the Brooklyn Heights Railroad, in charge of Motorman Charles Kubne. The bicycle was smashed, but Steinert fortunately escaped from getting under the car. The fender struck him and pushed him along for a distance of twenty-five feet before the car was stopped.

Steinert was badly shaken up and much bruised. Roundsman Knox, of the Grant Street station, came up and asked him if he wanted an ambulance called. Steinert replied in a dazed way that he did not think he was seriously enough hurt for that. Then Knox arrested him and locked him up for intoxication. When the sergeant at the desk was asked if Steinert was intoxicated, he replied: "Well, he seemed dazed."

Read the above carefully, and compare the ordinary symptoms of alcoholic intoxication — either in your own unfortunate experience or that of your equally unfortunate neighbors. Did you feel or did they feel as if they had been struck

by a trolley car? Roundsman Knox and the sergeant, who locked up Steinert, certainly and literally added "insult to injury," and after the trolley man had "got through with him" deliberately took away his good character "because he seemed dazed." Neither Roundsman Knox or the sergeant at the desk had a right (after a severe accident, the man being pushed along the track twenty-five feet, and otherwise bruised and confused) to place him in a cell. A physician or surgeon should have been summoned and their judgment under the circumstances acted on.

Some time since the Kings County Medical Society appointed a committee to investigate concerning the care of persons who were found unconscious on the street or elsewhere by the police, and also more particularly to reform the action of the hospital authorities concerning the reception or refusal to receive all such persons — under certain conditions. The conclusions that the special committee finally arrived at after considering the whole matter from a scientific and humane standpoint, was that all persons found upon the street in an unconscious or semi-conscious condition, or in such condition as not to care for themselves, should receive prompt medical aid, and if necessary be removed to the nearest hospital, and that the mere supposition of intoxication should not interfere with such care or disposal of the persons rendered unconscious or unable to care for themselves. The committee showed that not unfrequently persons were seriously injured while intoxicated, and that frequently alcoholic liquors were given to persons after injury or sickness; so that the mere fact that the patient was under alcoholic influence should not exclude the possibility of possible serious injury or disease.

The fact was that Steinert was suffering from slight cerebral concussion, resulting in confusion of thought and simulating a mild form of alcoholic intoxication. It was simply a case of mistaken diagnosis on the part of doctor Roundsman Knox and the sergeant who acted as consulting surgeon in the case.

The remedy, a night in the lock-up, was rather severe and totally uncalled for. The system is a wrong one that put Roundsman Knox in the position to differentiate between cerebral concussion from a trolley-car accident and a mild form of alcoholic intoxication. We suggest a new question to be answered by all applicants for the police force, in accordance with the rules governing the civil service examination: "What are the main points in the differential diagnosis between moderate cerebral concussion and consequent mental disturbance and the milder forms of alcoholic intoxication?" — *Dr. Mason in Brooklyn Medical Journal.*

RESPONSIBILITY OF INEBRIATES.

Dr. John F. Sutherland, Commissioner of Lunacy for Scotland, remarked as follows in a discussion at the late meeting of the British Medical Association:

"A person intoxicated cannot and does not know the nature and quality of the act, or that it was a wrong act, because intoxication is insanity of the most perfect type, no matter how transient. But while 'insane at the time' is a proper defense in such cases, how many specialists will enter the witness-box and testify to that effect? If they did, I do not believe any jury would convict of the capital charge. No; the judicial dictum of 1843 is not, at all events in regard to them, at fault. It is not the law that is at fault, rather is it the hesitancy of medical witnesses to take a proper stand, which is blameworthy, and likewise the fact that the accused as a rule, being poor, have not the means to secure legal aid commensurate with the gravity and responsibility of the case. Consequently such cases, for the most part, fall into the hands of inexperienced lawyers, and matters are made worse by the knowledge that the aid of the specialist cannot be got. No fund for such special cases is available in Scotland. Were it in existence, several of the verdicts of recent years would have

been different. In some of the worst cases there was practically not the semblance of a defense.

“ It is in this direction a change is needed. In regard to such case I would venture to point out some of the judicial fallacies that have arisen. One hears of the occupant of the bench sometimes speaking of the ‘ willful ’ nature of the drunken attack, the ‘ voluntarily ’ induced state of mind of accused, and not least that the death sentence is a ‘ terror ’ to drunkards. In none of these views can I concur. Can a drunken man do a ‘ willful ’ act ? I should be inclined to think that this is highly problematical, and that it does not even afford that presumptive evidence required in a court of law. Much might be said against the theory of ‘ voluntary ’ drinking. Who can say with a degree of certainty in the advanced stage of a chronic drunkard’s bout that the drinking was voluntary ? for that would imply the certainty of an absence of latent or patent physical and mental degeneration induced by the vicious or the diseased habit. The former in time merges into the latter. All is uncertainty. Then there is the supposed deterrent effect which the scaffold is said to produce in the minds of drunkards. There could be no greater delusion, and drunkards were as numerous on the next ‘ pay day ’ as ever they were, and deal out violence as freely and as maniacally as ever they did. The marvel is that, instead of having thirty indictments for murder every year, there are not 1,000, and as a consequence capital punishment multiplied a thousandfold. This is an aspect of the question which is overlooked. The violence of the drunkard is not measured, so great is the mental disturbance of the senses and faculties. It could not be otherwise real: consciousness either does not exist, or is of the dimmest. The intoxicated authors of crimes of violence are insane: the duration of the insanity from a medico-legal point of view is of no moment, and by the criterion of a possibility laid down in 1843, the drunkard should not be responsible, and would not if the expert looked at the matter from the point of view now submitted. But if

this view be not accepted, then the crime should be reduced from murder to culpable homicide, as is the case in many countries. Some Scottish judges view it in this light. If 'insane at the time' were proved, there would still be the protection for society by detention in a safe place of custody."

CHRISTIAN SCIENCE. A SOCIOLOGICAL STUDY.

By Charles A. L. Reed, A.M., M.D., Cincinnati, O. Gynecologist to the Cincinnati Hospital; ex-President and Fellow of the American Association of Obstetricians and Gynecologists.

The history, philosophy, and methods of Christian Science, and the law governing its practice considered, in a well-printed 12mo book, handsomely bound in paper. Single copies, 10 cents. Sent postpaid on receipt of price. McClelland & Co., publishers, Cincinnati, Ohio.

THE NATIONAL TEMPERANCE ALMANAC AND TEETOTALER'S YEAR-BOOK FOR 1899. Compiled by J. B. Dunn, D.D.

Contains statistical tables of liquor traffic, army of liquor dealers, government drink saloons, revenue receipts, doctors and drink, America's great drink waste, drink and the labor problem, drink and crime, object lessons, the church, liquor sellers, with a list of the temperance periodicals in North America. Tables of names and post-office addresses of the National and state chief officers of the Sons of Temperance, Good Templars, Templars of Honor and Temperance, National W. C. T. U., National Non-Partisan W. C. T. U., Catholic Total Abstinence Union of America, Royal Templars of Temperance, Sons of Jonadab, Independent Order of Rechabites, National Prohibition Party, American Anti-Saloon League, State Temperance Societies. National Temperance Society and Publication House, 3 and 5 West 18th Street, New York city.

The *Physicians' Visiting List for 1899*, by P. Blakiston Son & Co., of Philadelphia, Pa., maintains its superiority as before. The arrangement of pages, and the tables of practical facts are invaluable for the physician. Once this book is used it becomes a fixture indispensable every year.

THE PHONENDOSCOPE AND ITS PRACTICAL APPLICATION. By Aurelio Bianchi, M.D., Professor of Preparatory Clinical Medicine and of Pathology, Parma; translated by A. George Baker, A.M., M.D., author of "Revival of Learning," etc. George P. Billings & Son, Philadelphia. 1898.

This volume graphically explains the great value and practical uses of the Bazzi-Bianchi phonendoscope. The phonendoscopy of the various organs, with illustrations of the surface markings of the lungs, heart, liver, stomach, is excellent. There is a chapter on the relation between the outlines of the internal organs as determined by the X-ray and by the phonendoscope, and another chapter is devoted to the mechanical description of this instrument. The application of the phonendoscope in the course of pregnancy, as explained and illustrated in this book, is unique. In the hands of the general practitioner this instrument will be found of inestimable value.

THE DETERMINATION OF SEX. By Leopold Schenk, M.D., Professor in the Royal University, and Director of the Embryological Institute in Vienna. The Werner Company, Chicago, Akron, O., New York, publishers. 1898.

In this work are grouped a great variety of facts, both old and new, and most of which are marshaled to prove the theory, viz.: that sex can be determined by feeding and nutrition. Certain diets will determine the sex with certainty. The vigor or poverty of the parent are asserted to be the great factors in this question. The presence in the excreta of certain substances indicate the possibility of the sex in the coming

child. Certain articles of food favor the growth of one or the other sex, and finally it is a matter which can be regulated by intelligent and scientific feeding and use of the means and measures. The reader is deeply interested, and while not always convinced, is impressed with the theories and the possibility of the conclusions. The work is well worth reading, and will stimulate a new investigation in an unknown field.

Its practical interest to our readers will come from its bearing on the children of inebriates. The question is often asked: "What influence on sex has the use of spirits?" This is unanswered so far. As a contribution, throwing sidelights on the subject, this work is of great interest, and we commend it to our readers. The translator and publisher have brought out the work very clearly, both in expression and topography.

CRIME AND CRIMINALS. By J. Sanderson Christison, M.D., formerly of the New York City Asylums for the Insane; author of *Normal Mind*, etc. Chicago Medical Book Co., 35-37 Randolph Street, Chicago, Ill. 1898.

This little work is a grouping of recent cases which have become prominent, pointing out the particular hereditary and degeneracy. He divides all cases into three classes: The insane, those defective in reason; the moral paretics, defective in self-control; the criminal, those defective in conscience. His efforts to study these classes from photographs and life histories is the most satisfactory way of getting any clear view of the facts and laws of degeneration. We trust the author will bring out a larger volume on the same lines.

DEGENERACY: ITS CAUSES, SIGNS, AND RESULTS.

By Eugene S. Talbot, M.D., D.D.S., Fellow Chicago Academy of Medicine; Professor of Dental and Oral Surgery, Northwestern University, Chicago, Ill., etc. Walter Scott, Ltd., Paternoster Square, London; Charles Scribner's Sons, Fifth Ave., New York, importers. 1898. Price, \$1.50.

This is a volume of the Contemporary Science Series, issued by Walter Scott, London, the object of which is to condense and put into a readable form the latest researches of science for the popular reader. This work compares most favorably with other volumes of this series, and will take equal rank with books of Huxley, Maudsley, Ribot, Cloud, and other masters of science.

This volume covers three hundred and sixty pages, with eighteen short chapters, in which the following subjects are discussed: Ethical Degeneracy, Intellectual Degeneracy, Sensory Degeneracy, Spinal and various congenital hereditary Denerations, Nutritive Degeneracy, and reversionary tendencies. Among the most interesting parts are the studies of the external signs of degeneracy in the head, face, mouth, throat, ears, and other parts of the body. The author has made some very original studies of these symptoms, which have attracted much attention, and constitute a new and very significant field of study. The work comprises a mass of graphically condensed facts on all the general causes of degeneracy. The grouping of these facts to support definite conclusions is at least very suggestive, and, while often unsatisfactory in brevity, is always very stimulating. The reader is left with an intense desire to go over the facts again and verify the conclusions. The chapter printed elsewhere gives a good idea of the value of this work. We commend this work to our readers as one of the very few books which is not exhausted by one reading; also a rare work for the facts which it compiles and places before its readers in an available form.

Dr. Talbot has the intense satisfaction of knowing that his work will be a monument that will live far down in the future. Such works have a permanent encyclopedic character for the facts they contain, which outlive both the author and the generation he lives in. Again, we commend this work as an essential to every working library of every thinking man. We hope to quote freely from its pages in the future.

SAJOUS'S ANNUAL AND ANALYTICAL CYCLOPE-
DIA OF PRACTICAL MEDICINE, VOL. II, BRO-
MIDE OF ETHYL TO DIPHTHERIA. Edited by
Charles E. de M. Sajous, M.D., assisted by one hundred
associate editors. F. A. Davis Company, publishers, Phila-
delphia. 1899.

The second volume of this really great work more than
fulfills the expectations of the first volume. The articles pre-
sented, and the grouping of the facts are eminently practical
and clear, and especially useful for rapid review of any subject
by a busy man. All the topics are fresh and contain the latest
facts put in a very satisfactory way for ready reference. No
more valuable and practical volume can be added to a working
library than this. Dr. Kerr, one of the associate editors, has
a rich contribution on cocaineism in this number.

Dr. Gros has compiled an excellent monograph on a
modern study of rheumatism, gout, and allied affections, which
is of more than usual interest, and will repay a careful reading.
Fongera & Co. of William Street, New York, are the pub-
lishers.

We receive a large number of exchanges of temperance and
philanthropic journals that are welcomed in the field of re-
form. They are all doing good work, and are helpful to their
constituents, and it is a source of pleasure to know that the
interest along these lines is growing rapidly. There are over
one hundred papers in this country and Canada devoted to the
temperance cause, issued weekly, monthly, and quarterly.
Another hundred journals are devoted to special forms of
philanthropic work, in which temperance is made prominent
next to the cause they are promoting. All this is significant
of change and growth. The theories and customs of the
present are evolving outward and upward.

We have received from Boehninge and Soehne, chemists, of New York, a very interesting pamphlet by Dr. Thompson, on "Clinical Observations of Lactophenin"; also an elaborate study of Ferratin, by five different physicians on different phases of the action of this drug.

Appleton's Popular Science Monthly begins the new year with a continuation of Prof. Ripley's "Racial Geography of Europe," one of the most interesting studies of the times.

The evolution of the colonies, by Prof. Collier, is another most interesting study of history from a new point of view. Other short articles of equal interest appear with these, making this one of the really most indispensable magazines of the times.

The *New Voice* has turned to the more peaceable fields of literature, and, while preserving its original pioneer character, is still the able advocate of prohibition, and a family paper of unusual excellence.

The *Homiletic Review* is one of the most thoughtful, suggestive visitors that can come to any literary table. The publishers, Funk & Wagnalls of New York city, offer great inducements to new subscribers.

The *Scientific American* grows richer in facts and illustrations of new discoveries every year. A weekly reading keeps one in touch with the great events of science.

The *International Dictionary*, the evolutionary growth of over a quarter of a century of Webster's, is a vast library in one volume, and should be in the home of every family in the country. See advertisement.

Editorial.

1899.

The JOURNAL OF INEBRIETY enters upon the closing year of the century pleased that its twenty-one years of constant effort in collecting and presenting the facts relating to inebriety has far exceeded the most sanguine expectations. The JOURNAL has literally organized an army of facts into the realm of science, and prepared the way for larger and more extended studies. The disease of inebriety and its prevention and cure has practically been discovered, and a new field of medical research opened up for investigation. The great drink problem of past ages has come into the province of science. The JOURNAL and its founders have been marking out boundaries where inebriety, insanity, epilepsy, hysteria, and a host of border-land diseases join and overlap. Also they have outlined the great streams of heredity, nutrition, exhaustion, climate, poisoning, and other forces at work in causing inebriety.

No other journal has ever lived to see the principles and truths it attempted to promulgate so fully accepted and endorsed in so brief a time. No other journal has passed so successfully the three stages which all new truths must encounter. neglect, indifference, denial, opposition, then endorsement and acceptance. No other journal has opened up so wide a field for medical research, and cleared away so many theories and delusions of long centuries. The wild bitter criticism which concentrated on the JOURNAL and its founders has been constructive, and not destructive, as it was intended.

The facts concerning the disease of inebriety is no longer misty theory and dogmatic opinions; it is no longer a battleground for the conflicts of superstition, logic, and morals. It

is a new continent where each can glean the facts and their meaning for himself. To all critics and friends the JOURNAL sends its warmest greetings. The light of the new century coming up the dawn is already radiant with promises of greater progress and greater discoveries along the line of inebriety and the laws of development and prevention.

MORPHINISM AND CRIME.

Recently I have seen some new phases of the palsy from morphine which are very significant, and have not been noticed before. This case brings out the facts. A clergyman of higher average ability and culture, a doctor of divinity, with strong mental and physical qualities, began to use morphine after the sudden death of his wife. Soon a change appeared in his character. He became untruthful and began intrigue to secure a larger salary, and took advantage of every opportunity to procure money. He left the church under a financial cloud, and for the next five years became a ministerial tramp. Then he appeared as a confidence man, collecting money for fictitious purposes, preaching and praying with great earnestness and fervor, collecting money and using it in stock gambling. I found him using from four to ten grains of morphia a day in half-grain doses. When the effects of the morphine passed away, deep contrition and a partial consciousness of his condition would appear. He would cry and pray and be very penitent, and ask for help and prayers of every one. After using two half-grains of morphia he became composed and reserved, and all his mind seemed concentrated on some scheme to take advantage, by borrowing money on promises, begging it for charity, and stealing it if the chance of detection seemed small. He would falsify with boldness and frankness that was convincing. He would make oath to falsehoods, and then explain them with great adroitness and criminal skill. The action of the drug changed him completely. His mind

became alert, clear, and resourceful. All fear of consequences or results of words and conduct passed away. His moral nature and all consciousness of right and wrong were cut off. He lost all power to judge of his acts and words, and acted as if they were real, deceiving and lying with a frank earnestness that was convincing beyond all question. He forged notes, borrowed money, and contracted bills, collected money for the Red Cross Society, then disappeared. He came to me for treatment, and was penitent and sad at his failures, but was not clear as to the nature of his acts and conduct before. After a single dose of morphine, all his criminal boldness and cunning returned, and he ran away, taking with him some clothes. There was no failure of mind apparently when using morphine, but rather more activity and steadiness of act and thought, but a total change of his moral nature. He talked of honesty, of truthfulness, and all the noble traits of character, but seemed powerless to apply them in his case. He secreted morphine about his person and stole it from others on every occasion, seldom using more than a limited quantity himself.

The second case was that of a married woman, the mother of two children, with every surrounding luxury, who after some temporary illness began to use morphine. Two years later she became a kleptomaniac and practical confidence woman, not only stealing but begging money, and falsifying on every occasion. In the stores she would buy goods and order them sent to a fictitious address, to be paid for on delivery. She would beg money for fictitious charities. She would steal silver at parties and receptions, and when caught display boldness and cunning unusual. Her mind seemed unchanged, but rather clearer and more sharp. There was no passion or emotion, but a certain independence and apparent consciousness of honesty of action and thought was noticed. To her family the same tenderness and truthfulness were manifest, but out among strangers she was the most cunning, intriguing woman possible. Her schemes were so bold and

original that the detectives were baffled, and finally she was discovered, and a lunacy commission hesitated, then refused to certify to her insanity. In this case the same extraordinary palsy of her moral character was apparent. It was confined to the acquisition of money and property, and to petty acts of deception. Her sexual character was unaffected, but all her mental powers were concentrated on taking advantage of others, creating confidence in others and then taking advantage of them. During this time she was using from two to four grains of morphine a day. There seemed to be a time when she appeared to be in highest mental vigor: this would last two or three hours, and unless she could secure another dose would be followed by increasing nervousness and shrinking from all observation. Her face would become haggard and eyes twitch and her form bowed down. The change would be so great that she would hardly be recognized unless by those who knew her. It appeared that she did not realize her condition or the character of her acts when using morphine. Her memory was indistinct, and a very dull sense of her condition, also feeble powers of comparison of the ethical character of her conduct. She acted when using morphine as if she believed her words and acts were in the highest degree honest. The boldest thefts and deceptions were carried out as if no doubt of their nature existed.

In both of these cases there was not the slightest appearance of deception in the manner, tone of voice, or general conduct. The most apparent frauds were perpetrated with perfect coolness and conscientiousness of right. These were extreme cases, and yet they throw light on the common symptoms of deception noted in nearly all morphine-users. The higher brain suffers first, and questions of duty, right, and wrong become obscured. Certain forms of crime, particularly theft and intrigue, become fascinating, not so much for the money or articles to be secured, but there seems to be a keen pleasure in the intellectual triumph over their fellows, a

form of egoism to secure power over some one and to act under a mask, to have secret motives not apparent to others. With this occurs a certain faith in themselves and belief in their statements after being made. This is a transient condition, but can be kept up for some time after morphine is taken in small doses at intervals. It is probable that the withdrawal of morphia lifts this mask in part, but its renewal causes its return with more intensity. This after a time ends in delirium and dementia. This crime stage is not uncommon in all cases of morphine takers, and may vary in many ways, according to the mentality of the person. A fuller discussion will appear in a later journal.

SOME SIGNIFICANT FACTS.

The famous pioneer leader of the school temperance educational movement, Mrs. M. H. Hunt, is convinced that the decrease in the use of spirits in this country is due very largely to the school instruction of the dangerous effects of alcohol. This instruction began twelve years ago, and at present includes all the states of the Union except four. In most of the states this instruction is compulsory; and in all government schools it is a regular compulsory study. Two years after these laws went into effect a per capita decrease of the use of wine was apparent in the revenue returns. Five years later a marked decrease in the consumption of distilled spirits began. From 1888 to 1898 this decrease amounted to thirty per cent. Before this time there had been an increase, notwithstanding all the efforts of temperance people. Mrs. Hunt says on this point:

“During these ten years the only new feature in temperance effort that has been introduced so generally as to touch all parts of our country, has been temperance education in the public schools. During this period some of our prohibitory laws have been repealed and others have been weakened. Less,

rather than more, temperance platform work has been done in this time than during the preceding years. In addition to these untoward conditions, 4,301,452 people have come to abide in our country since 1888, bringing with them the wine, the beer, whisky, and gin drinking habits of lands across the sea. They have become American citizens, voting at our elections and drinking at our saloons. That the incoming millions, almost to a man, have been an addition to the alcohol consumers of this land, is a matter of public knowledge, and yet in the face of all these discouraging facts the consumption of some of the alcoholic liquors has steadily decreased during the past ten years, and that of all alcoholic liquors for the last five years.

“The brewers in their annual report for the year ending June 30, 1897, show that there was a decrease of 1,402,999 barrels in the sales of beer for the revenue year of 1897, as compared with those of 1896. There were 9,690 fewer liquor dealers in the United States in 1897 than the year before.”

This is most significantly called by Mrs. Hunt “the beginning of the end.” She further says:

“While not denying that other causes may have contributed something toward this marked decrease in the consumption of alcohol, a study of the tabulated reports from year to year shows a steady unmistakable decline in the consumption of alcoholic liquors, co-ordinate with the gathering momentum of the temperance education movement. We should not for a moment question the value of other temperance efforts which have helped to secure these results, but the figures show that such efforts without temperance education were not adequate to produce this decline in the treasury.”

There is deep significance in these statements, and no one can doubt that a tremendous power is at work in all schools and wherever the dangers of alcohol are taught. The growing interest in the drink problem noticed very generally all over the country is very likely to be intensified and increased by

this school instruction. It would appear that these statistics of a decrease in the use of spirits is clear evidence of a psychical epoch, and great wane of public opinion setting in against the present opinions and theories concerning alcohol. Beyond all question, temperance instruction in schools is a mighty power which will be manifest some day in a new generation of total abstainers.

Psychologically, the subject is of intense interest. The gathering hosts of temperance workers with all their theories and opinions of what the problem is and how to cure it; the few pioneer scientists who are trying to read the laws from the facts which they can note; together with the army of children being taught the dangers from this source, are all conditions which will certainly tell in the future. A great revolution and evolution is going on all about us, and some day it will be a great surprise that we did not recognize it and aid it in every way.

STUDY OF INEBRIETY.

A number of arrogant critics condemn the JOURNAL for not giving more facts and less theories. Their idea of progress in the study of inebriety is the collection of facts of pathological anatomy, to gather a great mass of microscopical and bacteriological facts, and go into the field of chemical physiology and determine the excreta and the chemical changes following the use of alcohol, and from this to determine the causes and progress of the disease of inebriety. This is a mistake which is apparent in the field of psychiatry. Insanity has not been discovered by these means, or is not understood more accurately to-day than a quarter of a century ago; yet the facts along these lines have been enormously accumulated. Laboratory researches have been increasing yearly, but from this point no new or startling facts have appeared. Inebriety, a state of poisoning, starvation, and degeneration, more complex than insanity, although a form of insanity, cannot be known by studies along these lines alone. If the gross disorders termed

insanity cannot be found by studies with the microscope and in laboratories, how futile to attempt to understand inebriety by this means.

For years great prominence has been given to psychopathological studies and clinical histories of cases. From these the uniformity of certain causes following certain states pointed to laws which could not be mistaken. Theories of disease following a uniform line from cause to effect have been found supported by clinical and psychological observations. Theories of alcoholic heredity, theories of palsies of the higher brain centers, theories of defective consciousness, theories of lowered sensory activities, theories of the presence of poison-products in the body, and other theories, have been sustained and confirmed by studies of cases. There has been far more accuracy in this, and greater advances toward the solution of the problem of inebriety, than from any microscopic or laboratory studies of dead tissue.

The *JOURNAL* publishes theories, philosophies, and opinions freely, together with facts from all sources; but the most important facts have come from studies of patients; also studies of the conditions of living and of functional activities of both mind and body. The psychopathology of these cases show more tangible evidence of the actual condition going on and the causes than other inquiries. This is the path of the *JOURNAL*, not ignoring any line of inquiry, but always conscious of advance and progress along these higher fields of psychological research.

M. Jules Le Jeune, ex-Minister of Justice, gives the following statistics of the condition of Belgium: Seventy-four per cent. of all convictions in the criminal courts come from the use of alcohol. Seventy-nine per cent. of all paupers are drunkards. Eighty per cent. of all suicides have a similar origin. Forty-five per cent. of all lunatics came from the excessive use of alcohol. He concludes that the drink problem is a very serious question in the deterioration of the country.

SEVENTH INTERNATIONAL CONGRESS AGAINST
THE ABUSE OF ALCOHOLIC LIQUORS, TO BE
HELD IN PARIS, 4TH TO 9TH, APRIL, 1899.

The preliminary program of this congress gives promise of the widest discussion of this topic ever made at any one gathering. Nearly every aspect or phase of alcoholic injury and loss is treated by persons familiar and able to discuss it.

The morning sessions are to be confined to scientific studies. The following are some of the topics announced under three heads:

First, A. "Medical Science and Hygiene."

- "The Doctor and Alcohol," Dr. Mapain, Liege.
- "Prejudice and Alcohol," Dr. Bienfait, Liege.
- "Scientific Knowledge and Alcohol," Dr. Smith, Bordensea.
- "Physiology and Alcohol," Pasteur Martale, Berne.
- "Child Life and Alcohol," Lady Henry Somerset.
- "Mortality and Alcohol," Dr. Baer, Berlin.
- "Muscular Effect and Alcohol," Dr. Laborde and Dr. Lapicsque, Paris.
- "Exciting Action of Alcohol," Dr. Gilbert, Toulouse.
- "Medical Value of Alcohol," Dr. Kantoroviez, Hanover.
- "Therapeutics of Alcohol," Dr. Drysdale, London.
- "Public Institutions and Alcohol," Dr. Amery.
- "Tuberculosis and Alcohol," Dr. Uhiron, Roumania.
- "Inebriate Asylums," Dr. Forel, Zurich; Dr. Colla, Pomerania; Dr. Crothers, America; and Pasteur Marthaler, Berne.
- "Non-Alcoholic Drinks," Dr. Jordy, Berne.
- "Fruit Diet and Alcohol," Dr. Kamp, Frankfort.

Second, B. "Political and Social Economy and Legislation."

- "Longevity and Alcohol," Dr. Drysdale, and Mr. White, U. K. A., England.

- “ Assurance and Alcohol,” Dr. Jordy, Berne, and Mr. Bingham, London.
- “ Prohibition of Alcohol.” Dr. Dawson Burns and Mr. Fielden Thorp.
- “ Women’s Duty,” Miss Grey.
- “ Inebriate Legislation,” Dr. Norman Kerr.
- “ High License,” M. Caudelier.
- “ Number of Drink Shops,” M. Caudelier.
- “ Local Option,” Dr. Legrain.
- “ Netherlands Legislation,” M. Van don Meulen.
- “ Effect of Alcohol on Commerce,” Dr. Brunon.
- “ Number of Victims of Alcohol,” Pasteur Marthaler, Berne.

Third, C. “ Teaching, Education, and Propagation.”

- “ Bands of Hope,” Miss Hilda Dillon.
- “ Abstinence and Moderation,” Dr. Alice Drysdale, and Dr. de Colleville.
- “ The Bases of the British Movement,” Mr. Robert Rae.
- “ Reform of Public Houses,” Mr. W. Bode.
- “ Recreations,” Dr. Daum, Vienna.
- “ Temperance Establishments,” Dr. Legrain.
- “ Sailors’ Home,” M. Ruyssen, Rochelle.
- “ Catering,” Mr. Clarke Wilson.
- “ Counter Attractions against Alcohol,” Rev. James Sylvester.
- “ Origin and Work of the National Temperance League,” Mr. J. T. Rae.
- “ Good Templars,” Mr. Councillor Malins.
- “ W. W. C. T. A.,” Miss Agnes Slack.
- “ Railway Union,” Mr. A. C. Thomson.

The afternoon meetings are to be open for educational, moral, and sociological studies of the drink problem. The first day the various questions of the relation of alcohol taking to the higher university training will be presented. The following are some the speakers: M. Brisson, Professor at the

Sorbonne; Dr. Brunon, Director of the School of Medicine, Rouen; M. Ruyssen, Professor at the Lycee, Rochelle; M. Gilbaut, Professor at the Lycee, Toulouse.

The second afternoon the temperance cause in the primary schools will be discussed by many of the leading educators of France, Germany, Switzerland, the Netherlands, and other places.

The third afternoon session will take up alcoholism among workmen in city and country.

The fourth session will study alcoholism on native races and the means of prevention.

The evenings will be open for the discussion of special topics by leaders and specialists. One will be devoted to the work of societies, the other to the influence of law and legislation, the other to women's work, the other to the crime phases of the question, and so on.

The President of this congress, Dr. Legrain, is the Medical Director of one of the largest Insane Asylums of France, and an author of eminence on diseases of the brain and nervous system. Other officers include many prominent medical teachers, scientists, and government officials, and distinguished philanthropists. It is proposed to have representatives of every society and organization for temperance in the world, and if possible arouse a new interest in this topic, which is fast becoming the great theme of civilization. Twelve great countries of Europe have announced delegates to this meeting, and nearly a hundred leading men have been enrolled to take part. Five hundred delegates are expected, and it is expected that this meeting will be one of the most memorable ever held devoted to this subject. Short papers are earnestly solicited on any one phase of the subject from American workers in this field. All letters should be addressed to the American Chairman of the Organization, T. D. Crothers, M.D., Hartford, Conn.

SEASONABLE PRESCRIPTIONS.

Douche for Nasal Catarrh, Ozaena, etc.

℞ Antikamnia and Codeine Tablets, No. xxiv.

Sig.—Crush and dissolve six tablets in a pint of tepid water and use one-third as a douche three times a day. Shake well before using.

Snuff for Acute Coryza, Rhinitis, etc.

℞ Acidi Borici Pulv., dr. i. Acidi Salicylici, gr. vi.

Antikamnia (genuine), dr. i. Bismuth Sub-Nit., dr. ii.

M. Sig.—Use as snuff every one, two, or three hours, as required.

The *Courier of Sobriety* is the title of the first temperance journal published at St. Petersburg, Russia. It is edited by Dr. Grigorief, who has long been a subscriber to our journal. It appears to be both a popular and scientific journal, and addressed to clergymen and physicians and philanthropists generally. Dr. Grigorief is about to issue a book on "Hospitals for Inebriates," which will serve as a guide for further study and advance.

HOW MUCH CRIME AND PAUPERISM IS DUE TO DRINK?

The Massachusetts Legislature of 1894 directed Hon. Horace G. Wadlin, Chief of its Labor Bureau, to investigate and answer this question. For his subjects he took all of the inmates of our state institutions for the twelve months of 1895. His results were reported in 1896, and are substantially as I give them to you under the three heads.

PAUPERISM. 3,620 CASES.

Sixty-five in each 100 addicted to alcoholic drink habit; 48 in each 100 had one or both parents likewise addicted; of all, 62 in each 100 used tobacco; of all the male adults, 75 in each 100 used tobacco. His conclusion is that alcohol "tends directly to create a permanently pauperized population." John Bright declared that, in the British Parliament, many years ago.

CRIME. 26,672 CASES.

In liquor at commission of offense, 21,863, or 82 in each 100; 4,852 others in liquor when intent to commit crime was formed; 4,295 other offenses caused by the habit; in 16,115 cases, others, drink habits influenced the crime; of the 26,672, .94 addicted to the drink habit; of the adults, .96 addicted; of all, .58 had drinking fathers, .21 drinking mothers; of all, .85 used tobacco.

Mr. Wadlin's conclusion under the crime head, is that the traffic or habit "tends to create criminal instincts."

INSANITY.

(Connecticut has about 3,000 insane.) Examined, 1,836 cases. Of these he found .52 addicted to the drink habit; .65 of those had one or both parents thus addicted; .51 had grandparents with like habits; of the males, .51 used tobacco.

Dr. Debove declared that alcoholism was present everywhere in France, in the towns, in country villages, and among all classes. The resources and strength of the country were impoverished by this vice. It was no longer a condition of acute and sporadic alcoholism; alcoholism was now chronic in France. That country, according to Dr. Debove, has the unfortunate supremacy of being at the head of all the "ethylic nations." The proportion of alcohol at 100° drunk in Paris amounts to 14½ liters per head; in Belgium and Germany, 10 liters; England, 9 liters; Switzerland, 8; Italy, 6; Sweden, 4; Norway, 3; Canada, 2. This unenviable supremacy is on the increase, as it is in Belgium, the proportion in the other countries being a descending scale. There are in France 500,000 wine shops; in the North of France one for every 25 adults; in the Seine Inferieure Department one for every twenty-two adults, in Paris one for every three houses, not

counting the railway station bars. Dr. Debove told his hearers that no one escapes this epidemic: children, young girls, men, women, all suffer from it. In some parts of Paris nurslings are brought up by bottle a l'alcool. Dr. Debove calls upon the medical world by example, and by carrying on a crusade against this invading tide of alcoholism, to try to stem it.

His conclusions under the three heads are as follows: "Drinking habit once formed, transmits itself from parent to offspring, and the sins of the father are visited upon the children, not merely in fastening the appetite upon the child, but in subjecting him to pauperism, crime, or insanity, or all three." What chance in the world have such children?

ETIOLOGY.

Alcoholism on the part of the nurse is a competent cause of convulsions in a breast-fed child: such convulsions are preceded by nervous irritability, general hyperæsthesia; but without gastro-intestinal derangement, elevation of temperature, or pulmonary complication. They are apt to appear in extremely well-nourished children. As regards the fits, they show marked tendency to increase in number and severity. In some instances there may be anuria. Under such circumstances it is necessary to inquire carefully into the habits of the nurse, and to make a change as early as possible. — Meunier (*Jour. de Méd.*, April 25, 1898).

Sample of *Ecthol* was received, and at time of receiving had good case to use it. Miss ——— had misfortune to run hedge thorn one inch long in leg above ankle. It remained in one week, when she was brought to office to have it extracted. Was successful in removing thorn, but, it being a dead one, pieces of bark remained in wound. Disinfected wound with bichloride, bound it up, and sent patient home. Was summoned in two days and found limb inflamed to groin, swollen and very painful. Removed bandage, which was followed by small quantity of pus. Reapplied dressing. That night bottle of *Ecthol* was received: visited patient next day, and put her on *Ecthol*, teaspoonful six times a day, and injected medicine in the wound and applied cloth saturated with same. In four days pain, swelling, and inflammation gone, wound healing, and patient able to do her work.

A. L. STIERS, M.D.

Horsford's Acid Phosphate is a household remedy which can be used in many common cases of nervousness and dyspepsia; also in all cases of debility.

Bovinine is literally blood treatment, and no other medicine approaches this in accuracy of means to supply an end. Blood is supplied to the wasted system, and in many cases no other remedy come nearer to the true method of restoration.

“Be sure you're right, then go ahead.”

How much trouble, worry, and doubt would be removed from our minds did we conform literally to this homely adage.

We are all too prone to take things for granted, sometimes on the false assurances of dealers, that something else will answer the same purpose as *Pond's Extract*. It never does.

Maltzyme, with hypophosphates and plain, has been particularly valuable in the late prevailing influenza. It seemed to be not only a nutrient, but a heart tonic, and when used

the extreme muscular exhaustion and feebleness following this disease was prevented. In two cases this was so prominent as to suggest almost specific action. *Maltzyme* grows in favor wherever it is used, and in certain cases it is invaluable.

Listerine is a standard antiseptic, and has this advantage over all drugs of this class in uniformity of action and always reliable. *Lithiated Hydrangea* is another preparation of this firm, which is valuable as a renal alterative, and has become famous in many ways as a new remedy.

We call attention to a new preparation called *Fikular*, for constipation and intestinal debility, prepared by the Charles Roome Parmele Co. of New York city. It is said to be a most valuable combination.


Rickine is a formula from the coal tar products, which has proved very serviceable, and in influenza is almost a specific. It is prepared by an old reliable firm of the G. F. Harvey Co., Saratoga Springs.

Celerina has been before the profession long enough to establish its reputation as a nervous sedative and most efficient anodyne in many cases. Many cases are on record of its substitution for opium and its value in the withdrawal of this drug.

Again we call attention to *Fellows' Hypophosphites*. They need no praise, only a clinical test to show their value to the general or special practitioner. As a nerve and tissue tonic it tells for itself in almost every case.

Wheeler's Tissue Phosphates continue to be sold most abundantly in the belt of the great white plague of New England.

Horsford's Acid Phosphate



RECOMMENDED and prescribed by physicians of all schools for **Dyspepsia, Nervousness, Exhaustion**, and all diseases arising from imperfect digestion and derangement of the nervous system.

Sample size furnished physicians by mail free, or full size without expense, except express charges.

Prepared according to the directions of Prof. E. N. HORSFORD, by the Rumford Chemical Works, Providence, R. I.

Be sure to designate

“HORSFORD’S”

when prescribing.

RUMFORD CHEMICAL WORKS, Providence, R. I.

Beware of Substitutes and Imitations.

For sale by all Druggists.

ARDENDALE

A Sanitarium for the care and treatment of cases of

NEURASTHENIA, ALCOHOL,
AND DRUG INEBRIETY,

situated in a country section of Brooklyn, within driving distance of New York, Jersey City, and Brooklyn, and can be reached in 45 minutes from Brooklyn Bridge via Kings County Elevated R. R. (Brighton Beach Division).

CONSULTING STAFF.

L. D. MASON, M. D. JOHN C. SHAW, M. D.

VISITING STAFF.

WM. BROWING, M. D. C. F. BARBER, M. D.
A. S. AMBLER, M. D. J. T. DURYEA, M. D.

For terms and other information

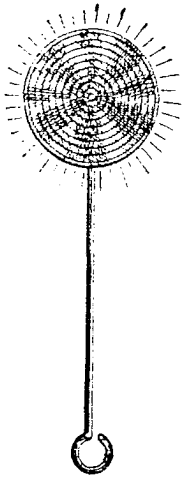
Address, J. J. WAGNER, M. D., *Superintendent.*

ARDENDALE

P. O. Station, O, - Brooklyn, N. Y.

TAKE NOTICE

THE JOURNAL OF SUGGESTIVE THERAPEUTICS, published monthly by THE PSYCHIC PUBLISHING COMPANY, Times-Herald Building, Chicago, was begun in August, 1896, and is now a recognized authority upon Scientific Mental Therapeutics.



The Easy Hypnotizer.
A FREE GIFT.

Translations from current articles in the *Revue del Hypnotisme* are a feature of each number.

Contributors are residents of every State in the Union, Canada, England, India, and Australia.

A postal card, if you mention this Journal, will bring you a sample copy.

We send *The Journal of Suggestive Therapeutics* one year, with the premium instrument, "THE EASY HYPNOTIZER," both for \$1.00.

Begin Your Subscriptions with the June Number.

In the September number, the Editor begins a Series of Lessons on "How to Hypnotize."

Address:

THE PSYCHIC PUBLISHING COMPANY,

211-212 Times-Herald Building,

CHICAGO, ILL.

LIST OF ALL THE LEADING WORKS

— ON —

INSANITY, BRAIN, AND NERVE DISEASES, WITH NAMES OF AUTHORS
AND PUBLISHERS, AND THE PRICE FOR WHICH MOST
OF THEM WILL BE SENT POST-PAID.

P. BLAKISTON, SON & CO.,
1012 WALNUT STREET, PHILADELPHIA.

Bain, Mind and Body. \$1.50.
Buckham, Insanity in its Medico-legal Aspects. \$2.00.
Bucknill and Tuke, Psychological Medicine. \$8.00.
Clevenger, Comparative Physiology and Psychology. \$2.00.
Clouston, Mental Diseases. \$4.00.
Creighton, Unconscious Memory in Disease. \$1.50.
Gowers, Diagnosis of Diseases of the Brain. \$2.00.
Kirkbride, Hospitals for the Insane. \$3.00.
Lewis, Mental Diseases. \$6.00.
Mann, Manual of Psychological Medicine. Cloth, \$5.00. Sheep, \$6.00.
Mills, Cerebral Localization. 60 cents.
———, Nursing and Care of the Insane. \$1.00.
Osler, Cerebral Palsies of Children. \$2.00.
Kerr, Inebriety, its Pathology and Treatment. \$3.00.
Rane, Psychology as a Natural Science. \$3.50.
Ribot, Diseases of the Memory. \$1.50.
Sankey, Mental Diseases. \$5.00.
Tuke, Mind and Body. \$3.00.
———, History of the Insane. \$3.50.
Arnold, Manual of Nervous Diseases. \$2.00.
Buzzard, Diseases of the Nervous System. \$5.00.
Gowers, Manual of Diseases of the Nervous System. \$7.50.
Lyman, Insomnia and Disorders of Sleep. \$1.50.
Mitchell, Injuries of the Nerves. \$3.00.
Roose, Nerve Prostration. \$4.00.
Stewart, Diseases of the Nervous System. \$4.00.
Wilks, Lectures on Diseases of the Nervous System. \$6.00.
Wood, Nervous Diseases and their Diagnosis. Cloth, \$4.00. Sheep, \$4.50.
Parish, Alcoholic Inebriety. Paper, 75 cents. Cloth, \$1.25.
Galton, Natural Inheritance. \$2.50.
Mercier, Sanity and Insanity. \$1.25.
Obersteiner, Anatomy of Central Nervous Organs. \$6.00.
Levinstein, Morbid Craving for Morphia. \$3.25.

G. P. PUTNAM'S SONS,
27 AND 29 WEST TWENTY-THIRD STREET, NEW YORK.

Charcot, Spinal Cord. \$1.75.
Corning, Brain Rest. \$1.00.
Dowse, Syphilis of the Brain and Spinal Cord. \$3.00.
———, Brain and Nerves. \$1.50.
Ferrier, Functions of the Brain. \$4.00.

List of all the Leading Works, etc., — Continued.

- Ireland, The Blot on the Brain. \$3.00.
Ireland, Through the Ivory Gate. \$3.00.
Letchworth, Insane in Foreign Countries. \$3.00.
Meynert, Psychiatry. \$2.75.
Tuke, Insanity and its Prevention. \$1.75.
Althaus, Diseases of Nervous System. \$3.50.
Beard, American Nervousness. \$1.50.
Stearns, Insanity, its Causes and Prevention. \$1.50.

LEA BROTHERS & CO.,
706 AND 708 Sansom Street, Philadelphia

- Savage, Insanity and Neuroses. \$2.00.
Hamilton, Nervous Diseases. \$4.00.
Mitchell, Diseases of the Nervous System. \$1.75.

WILLIAM WOOD & CO.,
43 East 10th St., New York City.

- Blandford, Insanity and its Treatment. \$4.00.
Branewell, Diseases of the Spinal Cord. \$6.00.
Rosenthal, Diseases of the Nervous System. \$5.50.
Ross, Diseases of the Nervous System. \$4.00.
Starr, Familiar Forms of Nervous Diseases. \$3.00.

D. APPLETON & CO.,
72 5th Ave., New York City.

- Bastian, The Brain as an Organ of Mind. \$2.50.
———, Paralysis from Brain Disease. \$1.75.
———, Paralysis. \$4.50.
Hammond, Nervous Derangements. \$1.75.
Maudsley, Physiology of the Mind. \$2.00.
———, Pathology of the Mind. \$2.00.
———, Body and Mind. \$1.50.
———, Responsibility in Mental Disease. \$1.50.
Hammond, Diseases of the Nervous System. Cloth, \$5.00. Sheep, \$6.00.
Ranney, Applied Anatomy of the Nervous System. \$6.00.
Stevens, Functional Nervous Diseases. \$2.50.
Webber, Nervous Diseases. \$3.00.

E. B. TREAT,
241-243 W. 23d St., New York City.

- Spitzka, Insanity; Its Classification, Diagnosis, and Treatment. \$2.00.
Beard, Nervous Exhaustion. \$2.00.
Corning, Headache and Neuralgia. \$2.00.
Howe, Excessive Venery. \$2.00.
Crothers, Inebriety. \$2.00.
Beard and Rockwell, Sexual Neurasthenia. \$2.00.
Hamilton, Medical Jurisprudence of Nervous System. \$2.00.
Shaw, Epitome of Mental Diseases. \$2.00.

LOUISVILLE SANATORIUM,

2103 W. Walnut Street,

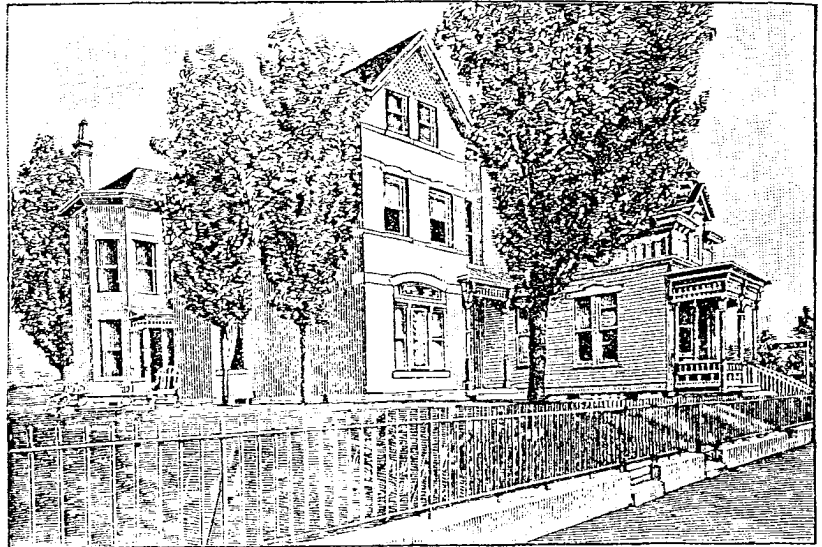
LOUISVILLE, KY.

FOR THE TREATMENT OF THE

Opium and Morphine Habit.

SUPPLIED WITH ALL MODERN APPLIANCES.

From a personal knowledge and an examination of facts, we believe that any case of OPIUM or MORPHINE habit can be cured in this Institution, no matter how long the drug has been taken or how much is taken daily, or in what way it is taken, provided the patients will give their moral support. The treatment has been tested for over two years without a single failure and can be taken with perfect safety to the patient.



The patients are under our immediate and personal care during treatment and are supplied with very attention and courtesy. Trained nurses are furnished and every precaution taken, when desired, to preserve absolute privacy.

All correspondence kept in strict confidence. The treatment is painless, absolutely sure and safe. The patient, after being cured of the morphine habit, is left in a weakened condition, and will need after-treatment, and rapidly regains flesh and strength lost during the continuance of the habit. For further particulars address,

SAM COCHRAN, M.D., Louisville, Ky.

REFER BY PERMISSION TO

Gen. Backsil Duke; Hon. Henry Waterson; Mr. W. N. Haldeman; Senator Wm. Lindsay; Hon. J. S. Blagburn; German Insurance Bank; and Doctors and Ministers of Louisville generally.

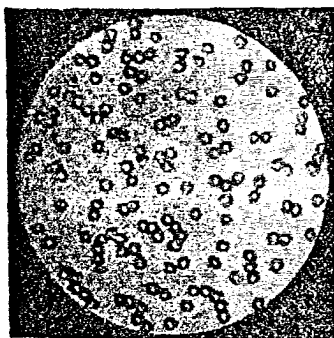
"The greatest therapeutic discovery of the age, and of the ages, is that where we cannot produce good blood we can introduce it."

What is Hæmatherapy?

A New Thing—and a New Name which, though literally translated (Blood Treatment), may not convey to every one a definite idea. It is a treatment which consists in opposing to a condition of disease the very power—good and sufficient Blood—that would naturally prevent it, that would still cure it spontaneously, and that actually does cure it spontaneously, wherever the blood-making work of the system is perfectly efficient; and therefore also *will* cure it, if a deficiency of the vital element be supplied from without, under proper medical treatment.

That Blood is such a power as here described, is an undisputed physiological fact. Its transmission from one animated organism to another, for the purpose of supplying a defect in the latter, is the substance of the Blood Treatment; and How to Do this, in different cases, is the form or description of the same. Blood may be taken from a healthy bullock (arterial blood—elaborated with due scientific skill); or it may be obtained in the well-attested living conserve known as bovine, from any druggist; and may be introduced into the veins of the patient in either of four ways, that may be most suitable to the case: viz.: by the mouth and stomach; by injection, with one-third salt water, high up in the rectum; by hypodermical injection; or by topical application to any accessible lesion.

A FILM OF BOVINE:
Showing the Blood-corpuscles Intact.



Micro-photographed
by Prof. R. R. Andrews, M.D.

THE CURE OF PULMONARY CONSUMPTION

is one of the latest and most wonderful developments of Blood Power—introduced mainly by the mouth, and sometimes also by spraying bovine into the trachea by an atomizer. Every week of judicious internal blood treatment, with proper medical and hygienic care, has resulted in steady improvement as to all symptoms, with scarcely an instance of check, much less of relapse, until complete apparent cure, and that in the more advanced stages of the disease. As further examples, may be mentioned: Anæmia, Cholera Infantum, Typhoid Fever, Hæmorrhagic Collapse, and many other of the most dangerous and aggravated diseases.

IN SURGERY: A CHRONIC ULCER,

of no matter how long standing or obstinate and aggravated character, can be cured with certainty—at least, the first instance of failure has yet to be heard of—by constant application of bovine to the wound with proper surgical treatment and sterilization. Such cases are usually cured in from four to six weeks. So of traumatic injuries of all kinds; carbuncles, fistulas, abscesses, and even gangrene.

NUMEROUS CLINICAL REPORTS

of well known Physicians and Hospitals, where the Power of Supplied Blood is constantly relied on as a cardinal factor in the cure of disease and support of surgery, are at the service of every practitioner who desires to keep up with the progress of his profession, and may readily be obtained (including, of course, the technique and subsidiary treatments pursued) by applying to

THE BOVINE COMPANY, 75 West Houston Street, New York.

LEEMING, MILES & CO., Montreal, Sole Agents for the Dominion of Canada.

SOUND VIEW HOSPITAL

STAMFORD, CONN. (Fifty minutes out from New York.)

FOR the treatment of Medical and Surgical Cases, by all the approved methods and appliances of advanced modern practice both medical and operative; specially including those of

Hæmatheraphy, or Treatment with Supplied Blood,

in which the most memorable progress has been made in the last three years.

Every patient will have special nursing as the case may indicate, and a competent physician and surgeon in constant attendance; together with mature scientific adaption of the

Power of Supplied Blood

to the case from day to day.

The staff of Visiting Physicians and Surgeons comprises some of the brightest professional minds in the metropolis.

The Hospital is Beautifully Situated,

occupying a sequestered country seat on a high point of land, with extensive grounds, grove, and water front; is less than an hour's ride from New York City by the New Haven Railroad; and is also reached daily by the New York and Stamford boat.

T. J. BIGGS, M.D., Surgeon-Director, STAMFORD, CONN.

VISITING STAFF.

Dr. Percy Friedenbergl, Dr. J. Stafford, and Dr. J. J. Dooley, New York.
Western Consultant, Dr. R. W. Conant, 5490 Washington Ave., Chicago.

ATTLEBORO SANITARIUM.

We receive persons suffering from mild mental and nervous diseases, who need the influence of pleasant home surroundings, with the attendance of trained nurses and the watchful care of an experienced physician. Our methods are those which have been found best adapted for the relief and cure of this class of cases, and include Electricity, Massage, Baths, etc. Especial attention given to the preparation of foods to meet individual cases.

For references, terms, etc., address

LAURA V. G. MACKIE, M.D., ATTLEBORO, MASS.

MINDSEASE Sanitarium and Cottage Homes For Nervous, Mental, and Drug Cases.

Separate or collective care as desired or indicated.

The humid, equable, temperate climate of Portland, throughout the year, is often of great value in the treatment of nervous conditions, notably in the insomnia of neurasthenia. Address,

"The Office, Marquam." **HENRY WALD COE, M.D., Portland, Oregon.**

THE REVIEW OF REVIEWS

Monthly - Illustrated.



is the one magazine which the world has agreed is **INDISPENSABLE**. It will be more brilliant than ever during 1894. The readers of **THE REVIEW OF REVIEWS** say that it would keep them well informed if it were the only literature printed. It is especially valuable to

clergymen, professional men, farmers, and to all those who can take but one monthly.

**FAMOUS PEOPLE AND GREAT JOURNALS HAVE GIVEN
IT THE MOST UNQUALIFIED ENDORSEMENTS
EVER RECEIVED BY A PUBLICATION:**

James Bryce, M. P. Author of *The American Commonwealth*. "It is just what we have wanted."

Miss Frances Willard.—"This magazine has the brightest outlook window in Christendom for busy people who want to see what is going on in the great world."

Cardinal Gibbons.—"To the busy world who have not leisure to peruse the current monthlies, **THE REVIEW OF REVIEWS** will be especially welcome, as it will serve as a mirror, reflecting the contemporary thought of Great Britain and America."

New York World.—"THE REVIEW OF REVIEWS is admirable."

Boston Globe.—"To read a number is to resolve to never miss one."

Chicago Tribune.—"That useful and always interesting periodical, **THE REVIEW OF REVIEWS**."

Atlanta Constitution.—"Gives as clear an idea of the history of the month as could be obtained from volumes elsewhere."

Springfield Union.—"THE REVIEW OF REVIEWS is the best publication of the kind extant, and no busy man can afford to miss its monthly visits."

To the best agents we can offer extraordinarily liberal terms, which make **THE REVIEW OF REVIEWS** without a peer from the canvasser's point of view.

REVIEW OF REVIEWS,

13 Astor Place, New York City.

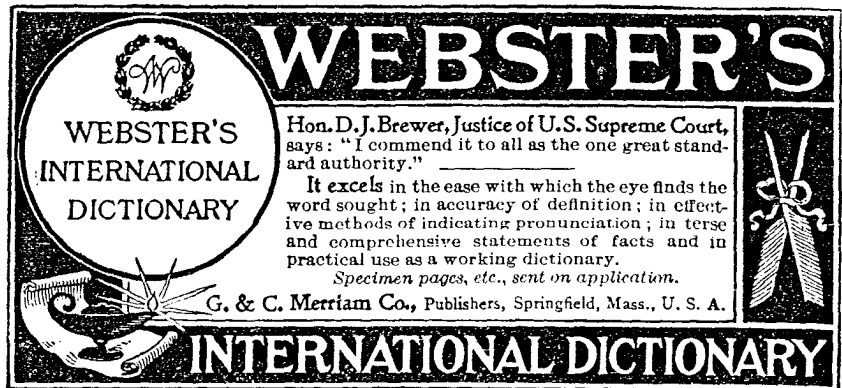
SUBSCRIPTION RATES.

Per Year, - - - \$2.50

Trial Subscription, 1.00
5 Months.

Sample Copy, - 10 cents.

For this price **THE REVIEW OF REVIEWS** gives as much reading matter as is contained in two ordinary magazines.



WEBSTER'S

Hon. D. J. Brewer, Justice of U. S. Supreme Court, says: "I commend it to all as the one great standard authority."

It excels in the ease with which the eye finds the word sought; in accuracy of definition; in effective methods of indicating pronunciation; in terse and comprehensive statements of facts and in practical use as a working dictionary.
Specimen pages, etc., sent on application.

G. & C. Merriam Co., Publishers, Springfield, Mass., U. S. A.

INTERNATIONAL DICTIONARY

BROOKLYN HEIGHTS

SANITARIUM

A PRIVATE HOME for the *special* treatment of Rheumatism, Gout, and all allied diseases, by the use of *Turkish, Russian, Roman,* and *Electro-thermal Baths,* and other remedial agents. Organized over twenty-five years ago, it is now the oldest Turkish Bath Establishment in this country. The long experience and constant development of the baths, both practically and therapeutically, give promise of the very best results in the treatment of these cases. The Home is elegantly situated on Columbia Heights, overlooking New York Bay. The rooms are large and sunny, and every appliance found valuable by scientific experience is used, making it a most desirable residence for invalids who need special treatment. To *Rheumatics* and *Chronic Invalids* unusual facilities are offered for both restoration and cure.

For further information, address—

C. H. SHEPPARD, M.D.,

81 Columbia Heights, Brooklyn, N. Y.

OPEN COURT PUBLISHING COMPANY,
924 DEARBORN STREET, CHICAGO, ILLINOIS.

BY ALFRED BINET.

THE PSYCHIC LIFE OF MICRO-ORGANISMS.

Pages, xii, 120. Cloth, 75 Cents; Paper, 25 Cents.

ON DOUBLE CONSCIOUSNESS.

New studies in Experimental Psychology. Pages, 93. Paper, 15 Cents.

BY PAUL CARUS.

THE SOUL OF MAN.

An Investigation of the Facts of Physiological and
Experimental Psychology.

With 152 illustrative cuts and diagrams. Pages, xvi, 456. Cloth, \$3.00.

BY TH. RIBOT.

THE PSYCHOLOGY OF ATTENTION.

Pages, 121. Cloth, 75 Cents; Paper, 25 Cents.

THE DISEASES OF PERSONALITY.

Pages, 157. Cloth, 75 Cents; Paper, 25 Cents.

THE DISEASES OF THE WILL.

Pages, vi, 121. N. E.—Full Set, \$1.75.

BY PROF. EWALD HERING.

**ON MEMORY AND THE SPECIFIC ENERGIES
OF THE NERVOUS SYSTEM.**

Pages, 50. Paper, 15 Cents.

FALKIRK,

JAMES FRANCIS FERGUSON, M.D.

M. LANGDON BIED, M.D.

On the Highlands of the Hudson, near Central Valley, Orange Co., New York. A home for treatment of Nervous and mental diseases, and the alcohol and opium habits.

Falkirk is 800 feet above sea level; the grounds cover over 200 acres; are well shaded and command a magnificent view. The buildings are new, steam-heated and lighted by gas, and the water supply is from pure mountain springs. All the rooms face the southwest, and the best methods in sewerage have been followed, and the arrangements for comfort and recreation include a sun-room, steam-heated in winter, for sun-baths and indoor exercise.

Dr. Ferguson and Dr. Sprague may be consulted at their office, 168 Lexington Avenue, New York City, Tuesdays and Fridays, between 11.30 A. M. and 12.30 P. M., and by appointment, or may be addressed at Central Valley, Orange County, New York.

THE AMERICAN JOURNAL OF INSANITY,

(ESTABLISHED IN 1844.)

EDITORS.

HENRY M. HURD, M.D., Baltimore, Md.
E. N. BRUSH, M.D., Baltimore, Md.
G. ALDER BLUMER, M.D., Utica, N. Y.
J. M. MOSHER, M.D., Albany, N. Y.

THE AMERICAN JOURNAL OF INSANITY IS A QUARTERLY
JOURNAL DEVOTED TO THE INCREASINGLY IMPORTANT
SUBJECT OF INSANITY IN ALL ITS RELATIONS.

This Journal is indispensable to those who desire to keep fully informed upon the medical, medico-legal, statistical, or administrative aspects of mental disease.

The Contents Include: Important Original Communications. Correspondence, Home and Foreign. Reviews of the Literature. News of the Institutions.

Physicians, Medical Jurists, Public Libraries will find this journal valuable.

YOUR SUBSCRIPTION IS INVITED.

SUBSCRIPTION PRICE, | ADDRESS | JOHNS HOPKINS PRESS,
\$5.00 PER ANNUM, | | Baltimore, Md.
IN ADVANCE. | |

A NEW TREATISE ON INSANITY.

A PRACTICAL MANUAL OF **Mental Diseases.**

SECOND EDITION.

By DR. E. RÉGIS.

PROFESSOR OF MENTAL MEDICINE, FACULTY OF BORDEAUX, FRANCE. FORMERLY CHIEF OF
CLINIQUE OF MENTAL DISEASES, FACULTY OF MEDICINE PARIS.

CLOTH, CR. 8vo, 716 PAGES, PRICE, \$2.50.

AUTHORIZED TRANSLATION BY H. M. BANNISTER, M.D., CHICAGO, ILL., WITH A
PREFACE BY THE AUTHOR. PRESS OF AMERICAN JOURNAL OF INSANITY.

Exclusive Agents:

P. BLAKISTON, SON & CO., BAILLIÈRE, TINDALL & COX,
1012 Walnut Street, PHILADELPHIA. 20 and 21 King William St., Strand, London.

Dr. Bannister's translation of Régis' treatise ought to have a cordial welcome in America. The book reflects the best of the modern French school, and will infuse a distinctly new element into the studies and practice of to-day.

The quality of a treatise on insanity is perhaps nowhere better shown than in the chapter on classification. . . . Judged by this standard, M. Régis' book is one of marked originality and precision of thought. This chapter alone will be a contribution of inestimable value to the American alienist, both for its clear philosophic method and for the fullness of its subject-matter. — *Medical News*, Phila., Nov. 3, 1894.

Its author is justly distinguished as an observer, teacher, and writer in this department, and he has given us, as might be expected, a model handbook, remarkable in point of arrangement and clearness. His views are also sound and advanced; and we know of but one recent work of its kind which approaches this in conciseness and fullness. — *Boston Medical and Surgical Journal*, Nov. 8, 1894.

THE HIGHLANDS.

A FAMILY HOME FOR NERVOUS AND MENTAL DISEASES.

WINCHENDON, MASS.

This "Family Home" is conducted by Dr. Frederick W. Russell, who has made the study and treatment of mental and nervous diseases, physical and nervous exhaustion, opium and alcoholic inebriety a specialty. The Home is not an institution or asylum. It is to all intents and purposes a "Family Home," where everything is made as homelike as possible. Patients are not subjected to the care of common nurses, but are provided with companions. Intelligent gentlemen are employed as attendants and companions of the male patients, and educated American women of experience are the attendants and companions of the lady patients.

The feeling of social degradation that is commonly felt by patients in Retreats and Public Institutions, who are subjected to the control of uncultivated nurses, is not experienced here. The utmost possible liberty is permitted, under suitable guardianship, to all the patients, and each one is regarded and treated as a member of a private family. Each case receives the attention and study given to private practice, and when needed the ablest medical talent in the country is called into consultation.

The Highlands, so called, is a pleasant mansion with cottages annexed, situated in the midst of ample grounds, on an eminence overlooking the town of Winchendon and the valley of Millers River. From the windows a superb range of hills and mountains can be seen, reaching from Wachusett in the southeast to Monadnock in the northwest.

A piano room, billiard room, bowling saloon, and ample stabling are provided on the grounds. The drives in the vicinity are considered delightful, and for healthfulness of location the Highlands are unsurpassed.

Dr. Ira Russell is the founder and superintendent of the Home, and letters inquiry should be addressed to Dr. F. W. Russell, the superintendent. For information we are permitted to refer to the following gentlemen:

- | | |
|--|--|
| C. F. Tolson, M. D., Prof. Mental Disease, Harvard College, 15 Marlboro St., Boston. | G. F. Jelly, M.D., 123 Boylston St., Boston. |
| W. C. Williamson, Esq., 1 Pemberton Sq., Boston. | C. H. Hughes, M.D., editor of <i>Alienist and Neurologist</i> , St. Louis, Mo. |
| J. H. Hardy, Esq., 23 Court St., Boston. | E. C. Spitzka, 130 E. 50th St., New York, N. Y. |
| Rev. G. J. Magill, D.D., Newport, R. I. | W. W. Godding, Superintendent National Insane Asylum, Washington, D. C. |
| Wm. A. Hammond, M.D., 43 West 54th St., New York. | Clark Bell, Esq., editor of the <i>Medico-Legal Journal</i> , New York City. |
| J. G. Webber, M.D., 133 Boylston St., Boston. | T. D. Crothers, M.D., Hartford, Conn. |

12th YEAR.

R. L. POLK & CO.'S
Medical and Surgical Register
OF THE UNITED STATES AND CANADA.

This is positively the only national Medical Directory published.

Embraces names of over 112,000 Physicians, with college of graduation, list of Colleges, Societies, Boards of Health, Journals, Mineral Springs, Hospitals, Sanitariums, Asylums, and other Medical Institutions: also Medical Laws of each State.

Physicians who have not given their names to our canvassers for insertion in the Register are requested to send them to R. L. Polk & Co., Detroit, Mich., immediately.

R. L. POLK & CO., Publishers,

NEW YORK.

CHICAGO.

BALTIMORE.

DETROIT.

An ideal method for the administration of Lithia in Rheumatism, Gout, Renal Calculi, Irritable Bladder or Urethra from excess of uric acid and as a general uric acid solvent in the uric acid Diathesis.

Hudor

Lithia

Water

40 grs. Carbonate of Lithia to the gallon of Doubly Distilled Water, charged with pure Carbonic Acid Gas. Table water contains 20 grs. to the gallon.

SPARKLING OR STILL.

The Hudor Co.,
54 Terrace, - - - Buffalo, N. Y.

OLD DOMINION STEAMSHIP LINE.

ONE OF THE MOST PLEASING COAST LINES SOUTH.

Delightful tours to Old Point Comfort, Norfolk, Newport News, Petersburg, Portsmouth, Pinner's Point, Richmond, Virginia Beach, Va., and Washington, D. C. Freight and passenger steamers sail from Pier 26 North River every week day, except Saturday, at 3 P.M., and Saturdays at 4 P.M.

Summer Excursion Rates to all Parts of the South.

Meals and Stateroom accommodations on steamer included. Baggage checked through. Stop-overs allowed.

Tickets good for return passage on or before October 31, 1898, except when otherwise noted.

Full information can be obtained upon application to General Offices of the Company.

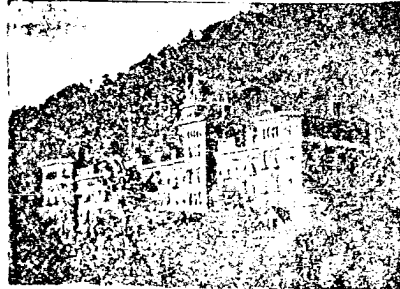
Pier 26, N. R., Foot of Beach St.

New York, N. Y.

THE PLACE TO REGAIN TONE OF NERVE AND MUSCLE.

THE JACKSON SANATORIUM

At Dansville, New York.



Main Building Absolutely Fire-proof.

For thirty-nine years the leading Health Institution in America, is under the personal care of regularly educated and experienced physicians, and is distinctive in its methods and character.

A delightful home for health and rest seekers in which every provision is made for recreation, comfort, and good cheer, as well as for skilled medical care and treatment.

A beautiful illustrated pamphlet with full information will be sent on application. Address

J. Arthur Jackson, M.D., Secretary,
P. O. Box, 101.

The Princess Anne Hotel,

AT

Virginia Beach.

*The Ocean and Pine Forests
make an Ideal Climate.*

*Finest Beach on
Atlantic Coast.*

An Ideal Place for New England Invalids in the Fall and Early Spring Months.

Golf, Riding, Wheeling, Bowling, Billiards, Bathing, Music.

For terms, please address T. EDMUND KRUMBHOLZ,
Virginia Beach, Va.

SYR. HYPOPHOS. CO., FELLOWS

Contains The Essential Elements of the Animal Organization — Potash and Lime ;

The Oxydizing Agents — Iron and Manganese ;

The Tonics — Quinine and Strychnine ;

And the Vitalizing Constituent — Phosphorus ; the whole combined in the form of a Syrup, with a slightly alkaline reaction.

It Differs in its Effects from all Analogous Preparations, and it possesses the important properties of being pleasant to the taste, easily borne by the stomach, and harmless under prolonged use.

It has Gained a Wide Reputation, particularly in the treatment of Pulmonary Tuberculosis, Chronic Bronchitis, and other affections of the respiratory organs. It has also been employed with much success in various nervous and debilitating diseases.

Its Curative Power is largely attributable to its stimulant, tonic, and nutritive properties, by means of which the energy of the system is recruited.

Its Action is Prompt ; it stimulates the appetite and the digestion, it promotes assimilation, and it enters directly into the circulation with the food products.

The Prescribed Dose produces a feeling of buoyancy, and removes depression and melancholy ; *hence the preparation is of great value in the treatment of mental and nervous affections*. From the fact, also, that it exerts a double tonic influence, and induces a healthy flow of the secretions, its use is indicated in a wide range of diseases.

NOTICE — CAUTION.

The success of Fellows' Syrup of Hypophosphites has tempted certain persons to offer imitations of it for sale. Mr. Fellows, who has examined samples of several of these, *finds that no two of them are identical*, and that all of them differ from the original in composition, in freedom from acid reaction, in susceptibility to the effects of oxygen when exposed to light or heat, in the *property of retaining the strychnine in solution*, and in the medicinal effects.

As these cheap and inefficient substitutes are frequently dispensed instead of the genuine preparation, physicians are earnestly requested, when prescribing the Syrup, to write "Syr. Hypophos. *Fellows*."

As a further precaution, it is advisable that the Syrup should be ordered in the original bottles ; the distinguishing marks which the bottles (and the wrappers surrounding them) bear can then be examined, and the genuineness — or otherwise — of the contents thereby proved.

Medical Letters may be addressed to —

Mr. FELLOWS, 48 Vesey S., New York.

The History of the First Inebriate Asylum in the World

Located at Rinehampton, N. Y.

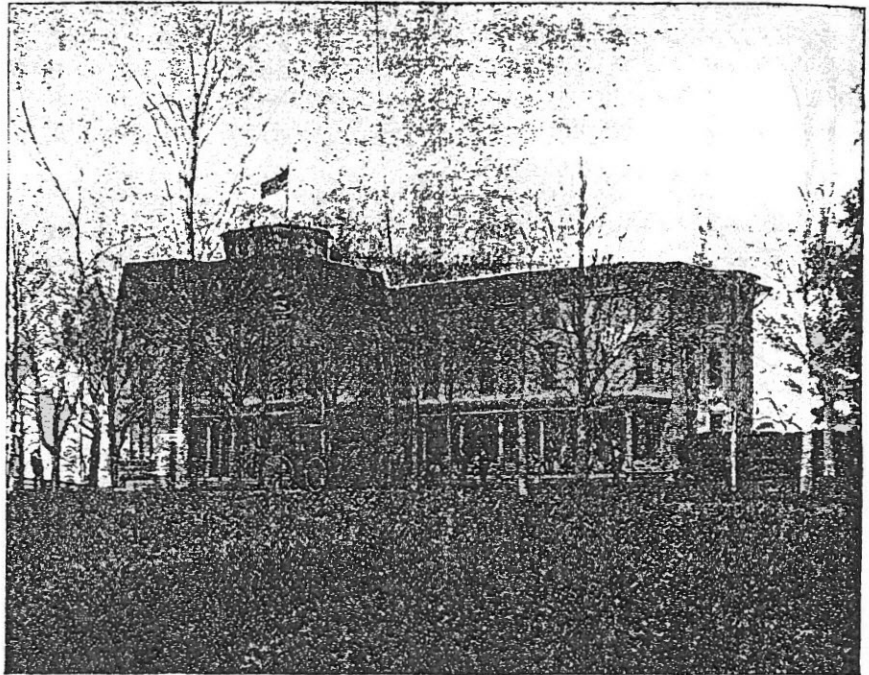
By Dr. J. E. Turner, the Founder and Projector

THIS is a most graphic, fascinating story of the difficulties and trials of one of the most important enterprises of the age. Dr. Turner, the founder, was finally turned out, and the asylum was changed to an insane hospital. This history was written a few years ago, and the copies are now out of print. We have recently succeeded in getting a part of the original edition from the publisher, and we will send to any one for sixty cents a volume post-paid. It is a large cloth-bound volume of five hundred pages, well printed and illustrated, and will be a rare work in any library. **SEND FOR A COPY.**

Address Journal of Inebriety,
Hartford, Conn.

Walnut Lodge,

A Private Hospital for the
Special Treatment of Alcohol
and Opium Inebriates.



THIS Institution was founded in 1878 on the modern view that *Inebriety* is a disease and curable. Each patient is made the subject of special study, and special medical treatment suited to the exact requirements of the case. The general plan of treatment is building up the diseased organism and restoring both mind and body to a healthy and normal condition, with *brain and nerve, rest, etc.* This is accomplished by *Turkish, Russian, and Suline Baths, Electricity, Massage, tonics, diet, and every other means known to science and experience* which have proved to be of value in these cases.

This Hospital is pleasantly situated in the suburbs with the best surroundings, and every appointment of an elegant residence

Experience proves that a large proportion of cases who come under treatment, and who unite with the physician in the use of all means of treatment, are permanently restored and cured. Each case has the direct personal care of the physician and attendant; and no one is received for less than four months unless by special arrangement.

All letters and inquiries should be addressed,

T. D. CROTHERS, M.D., Hartford, Conn.