

it. I concluded that if this was an opium delusion, she would have another attack, so the decision was postponed. Ten weeks later, she asserted that the same physician had visited her room at midnight and assaulted her the second time. The physician at the time was on the ocean with his wife, going to Bermuda, having sailed two days before the alleged act was committed. This woman was declared an opium-eater and went under treatment, from which she recovered, and no return of this delusion followed.

Fortunately these delusions are not very common, and are so often mixed up with circumstances that indicate their real condition as not to be mistaken.

PSYCHICAL HISTORY OF THE DRINK PROBLEM.

We have repeatedly called attention to a certain class of facts, which seem to prove that inebriety and the consumption of alcohol have a peculiar wave-like movement, rising and falling like the action of the tides, under the influence of certain psychical laws unknown at present. The prevalence of inebriety in small circles, where the history has been recorded for some years, brings out this fact in many ways. The following editorial from the *Temperance Record* indicates the same general fact in relation to the consumption of various alcoholic and non-alcoholic beverages. Its significance and value in a study of this very remarkable field cannot be over estimated.

Sir Frederick Hunt, in a motion before the British Parliament, "showed the consumption from 1861 up to the latest date, of tea, coffee, cocoa, and chicory, of alcoholic beverages, and of tobacco, compared with the increase of population," has just been issued, and is a most interesting study. The line on the diagrams showing the consumption of non-alcoholic beverages is almost uninterrupted upward. In 1861 the consumption of non-alcoholic beverages (tea, coffee, cocoa, and chicory) was 127,000,000 lbs. In 1862 it fell to

119,000,000 lbs. From 1862 there is a regular ascent till 1867, when the consumption was 159,000,000 lbs. In the following year there was a drop to 153,000,000 lbs., and thence a regular ascent till in 1879 it was 217,000,000 lbs. Next year it was 214,000,000 lbs., and then followed a gradual ascent till 241,000,000 lbs. was reached in 1885. A temporary drop of 4,000,000 lbs. was followed by a rise to 246,000,000 lbs. in 1888. A drop of 3,000,000 lbs. next year was followed by a rise to 267,000,000 lbs. in 1892, and then came a drop of 1,000,000 lbs. in 1893, the last year included in the return. Between the highest and lowest figures embraced in the return, the increase is shown to be 224 per cent. Per head of the population the increase is from 4.06 lbs. to 6.99 lbs.

On looking at the diagram which shows the consumption of tea, coffee, and cocoa separately, it is seen that by far the greatest increase has been in tea. In 1861 the tea consumed per head of the population was $2\frac{3}{4}$ lbs.; in 1893 it was about $5\frac{1}{2}$ lbs.—as nearly as possible double. In 1861 the consumption of cocoa was less than 3 oz. per head; in 1893 it was 9 oz. Coffee, in 1861, was consumed at the rate of $1\frac{1}{2}$ lb. per head of the population; in 1893 it had fallen to 11 oz.

Turning to the diagrams which show the consumption of alcoholic liquors, let us look first at beer. In 1861 the consumption was 20,000,000 barrels, and in 1876 it had risen to 31,000,000 barrels. The lowest consumption after that was in 1880, when 26,000,000 barrels were consumed; and about that figure the consumption continued till 1888, when a rise commenced, which attained its greatest height in 1891, when the consumption was 32,000,000 barrels. In 1893 it was only a little less. The diagram showing the consumption per head of population tells us that in 1861 it was $24\frac{1}{4}$ gallons. In 1874 it had risen to $33\frac{3}{4}$ gallons; in 1886 it had fallen to $26\frac{3}{4}$ gallons; in 1891 it was 30 gallons; and in 1893 it was $29\frac{1}{2}$ gallons.

The diagram showing the consumption of British and foreign spirits and wines tells us that in 1861 it amounted to

35,000,000 gallons, and there was an almost steady rise until 1876, when it amounted to 60,000,000 gallons. From that year there was an almost equally steady decline, until in 1886 it had got to 47,000,000 gallons. Again there was a rise, until in 1891 and 1892 it reached 54,000,000 gallons, and in 1893 it had declined to 51,000,000 gallons. The consumption per head of the population in 1861 was 1.22 gallons, in 1876 it was 1.80 gallons, in 1886 it was 1.30 gallons, in 1891 it was 1.42 gallons, and in 1893 it was 1.35 gallons.

Turning to the diagrams which indicate separately the consumption of rum, brandy, and Geneva and other foreign spirits, we find that in 1861 the consumption of rum was 3,500,000 gallons, or 0.18 gallons per head of the population. In 1867 it had risen to 4,300,000 gallons, or 0.28 gallons per head. In 1875, with fluctuations in the interval, it had risen to 5,400,000 gallons, or 0.36 gallons per head of the population. From this year there was a pretty steady decline till 1886, when it was 3,800,000 gallons, or 0.23 gallons per head; and then came a rise until 1890, when it was 4,600,000 gallons, or 0.24 gallons per head. In 1893 it had fallen to 3,800,000 gallons, or 0.20 gallons per head.

The consumption of brandy followed pretty much the same course as rum, rising from 1,500,000 gallons in 1861 to 4,500,000 gallons in 1876, and falling to 2,500,000 gallons in 1888, subsequently rising to 2,700,000 gallons in 1891, from which there was a slight reduction in 1893. Geneva and other foreign spirits (except rum and brandy) had a consumption of 250,000 gallons in 1861, and rose to 1,200,000 gallons in 1868, and in 1875 to 2,000,000 gallons. In 1880 the consumption had dropped to 600,000 gallons, and in 1889 it had again risen to 2,000,000 gallons, and in 1893 it was 1,500,000 gallons.

The diagram showing the consumption of wine gives lines indicating the fluctuations in the consumption of French, Spanish, and Portuguese wines, and then of wines other than French, Spanish, and Portuguese. In 1861 the consumption of French wines was 2,200,000 gallons, and it

rose to 4,500,000 gallons in 1868, and to 6,800,000 in 1876. From that time there have been fluctuations, mostly downward, and in 1893 the consumption was 5,500,000 gallons. Spanish wines were consumed to the extent of 4,000,000 gallons in 1861, and the consumption rose to 7,000,000 gallons in 1873. From that year there has been a pretty steady decline, and in 1893 the consumption was 3,100,000 gallons. The wines of Portugal were consumed in 1861 to the extent of 2,600,000 gallons, and in 1875 the consumption had risen to 3,900,000 gallons. A decline followed that year, and for several years the consumption was very steady at about 2,900,000 gallons. It rose again to 3,700,000 gallons in 1890 and 1892, and in 1893 was 3,500,000 gallons. The other wines have been very steady during the thirty-three years embraced in the return, ranging from 1,500,000 to 2,100,000 gallons.

The diagrams which show the consumption, per head, of British and foreign spirits, separately from foreign wines, show that in 1861 the consumption of spirits was nearly 7 pints per head, and it rose to 10½ pints in 1875; fell in 1887 and 1888 to 7½ pints; rose in 1891 and 1892 to nearly 8½ pints; and in 1893 was under 8 pints. In 1861 foreign wines were consumed at the rate of 3 pints per head; in 1873 and 1876 the consumption was 4½ pints; in 1886 and 1888 it was just under 3 pints, and so it stood in 1893.

The diagram referring to tobacco shows an almost steady rise in consumption from 35,000,000 lbs. in 1861 to 63,000,000 lbs. in 1893. These figures tell us that the consumption per head was 19¼ oz. in 1861, and 26 oz. in 1893.

[A striking confirmatory fact has just been made public in the Internal Revenue Report of this country, ending in June, 1894. This shows a reduction in the amount of spirits, wines, and malt liquors on which a revenue was paid of over ten million five hundred and ninety-five thousand dollars for the year of 1893. A reaction backward has clearly begun.—ED.]

STRYCHNINE DELIRIUM.

Those members of the medical profession who have employed caffeine very largely in the treatment of cardiac and renal disease, have recognized that large doses of this drug, continuously administered for a considerable period, developed in certain individuals what has been popularly called "caffeine craziness." In other words, the full medicinal doses required by the condition of the heart or kidneys have also been sufficiently large not only to produce an increased activity of the brain, such as is seen when coffee is taken in large amounts, but also have gone farther than this, and by the very cerebral stimulation produced temporary insanity. Within the last few years the medical profession has been employing in certain states what may be considered as massive doses of strychnine in the treatment of failing respiration or circulation, and has obtained therefrom very good results. It having been found that these full doses of strychnine acted favorably when given in an emergency, we have been tempted to continue their administration where the symptoms were relieved but temporarily, and, as a result, have oftentimes been pleased with their effect. On the other hand, a sufficient number of cases have been seen in which cerebral disturbance has followed these large doses to put us continually on the lookout for such untoward symptoms. As a rule, he who administers large doses of strychnine in an emergency is on the *qui vive* for some twitching of the muscles of the forearm or other portion of the body as an evidence of the physiological action of the drug. While we believe that these symptoms are commonly produced by a single administration of the remedy, we are also confident that its continued administration in full doses frequently fails to produce these evidences of heightened reflex activity, and in their place causes a more or less active delirium, in which the patient frequently refuses to take his medicine, or develops the delusion that his attendants are conspiring to poison him or do him some other injury.

The above editorial note in the *Theoretical Gazette* calls attention to a fact not often recognized. In cases of inebriety who have been drugged freely, particularly in those who have received strychnine, low deliriums and imbecilities are common. Remove all drugs and pursue the eliminative plan of treatment and these symptoms disappear.

THE SAN FRANCISCO HOME FOR INEBRIATES.

This well-known asylum has recently been assailed by a leading daily paper, the principal reason being the refusal of the board of trustees to pay two hundred dollars for a column of praise. It appears that various gold-cure establishments had fallen victims to this paper scheme, and paid liberally for an extravagant "write-up" they received. The refusal of this institution to buy the commendation of the public was followed by wild charges of abuses and wrongs, and appeals to the grand jury to investigate them. After a series of savage onslaughts and vindictive efforts to gather evidence against them, the grand jury found no cause of action, and the paper, of course, had the last word, and made the usual unpleasant ending to the scene. The gold cure schemers were clearly at the bottom of the trouble. While the charges of the paper were childishly assumptive, and showed very little knowledge of human nature and sad lack of business sense, the managers of the asylum failed to take advantage of this splendid opportunity to enlist the sympathies of the people. Attacks of this kind on strong, reputable asylums are welcomed by sharp business managers as magnificent advertisements that can be turned into gold and golden influences at once.

This Home has been before the public thirty years, and has been managed by very able men. The present Superintendent, Dr. Potter, is a well-known writer and teacher of medicine, and his management of this Home has commanded the respect of medical men all over the country. Asylums like this should never pray to be delivered from their enemies, but for an occasional battle with them, so they can keep right before the public and have a lively, healthy interest all the time.

MANY criminal inebriates suffer from sense delusions and hallucinations. They act from misconceptions and errors of the senses, which to them seem real. They are unable to correct these false impressions, or to judge of their value, but act at once as if they were real and true.

Aural hallucinations of voices, threatening and violent words, have caused many fatal assaults that were sudden and unprovoked. Visual hallucinations have provoked similar assaults, committed in supposed self-defense, and other unexplained acts are often traced to the same disturbances of the sense impressions.

THE Keeley gold-cure people are concentrating an immense amount of energy to secure laws in different States, giving judges power to commit chronic pauper inebriates to Keeley institutes at the expense of the tax-payers. The other gold-cure discoverers, who claim that they have better remedies than Keeley, oppose these bills. In many of the public hearings before the legislative committees, the question of which specific has cured the largest number of inebriates is discussed with great freedom and positiveness. From the statements on both sides, it is evident that Munchausen has been carefully studied, and his famous methods of expression copied with exactness.

Notwithstanding these peculiarities, the general subject of the public treatment of inebriates is receiving prominence and eliciting discussion that will clear away the heavy fog-banks of superstition which now invest it.

HABITUAL MISCARRIAGE.

R. Reece, M. R. C. S. Eng., 1851, L. S. A., 1832, Walton-on-Thames, England, says: I used Aletris cordial in a case of painful menstruation. It was most valuable. The wife of a minister suffered much and had had three miscarriages. Prescribed Aletris Cordial. She has, for the first time, gone her full time, and was safely confined with a male child. I also prescribed it to a relative, suffering with leucorrhœa for years. Great relief from pain, and the discharge much less. In the first case related it was truly a God-send to her.

DR. CHARLES HENRY BROWN of New York, editor of the *Journal of Nervous and Mental Disease*, says: "Maltine with coca wine has served me well in cases of neurasthenia from any cause. It serves as a most excellent sustainer and bracer. Besides these two essential qualities, we are forced to believe in another element in this combination, and that is the sedative quality, which makes it a most valuable therapeutic desideratum. It does not seem to me that this action depends entirely upon the coca, or the coca in combination with wine. My conviction is, that the maltine plays a leading part in this triple alliance" — *Medical and Surgical Reporter*, Dec. 22, 1894.

Clinical Notes and Comments.

DR. CHAUNCEY STEWART of Allegheny City, Pa., has used Iodia very extensively in his practice, and regards it as the "Ideal alterative—the *sine qua non* in the treatment of syphilis, scrofula, and all diseases arising from syphilitic contamination or a strumous diathesis. Iodia has this advantage over mercurial treatment in syphilis: when the patient does get well he is well. He is not tortured with mercurial rheumatism nor made to blush through the syphilitic blossoming of his face in after years. He is well. Unlike the long-continued use of other alteratives, Iodia does not reduce and debilitate the constitution, but invigorates and restores the vital power and enable the patient at all times to continue in the discharge of his vocation."

At this season of the year, when radical and sudden thermal changes are the rule, it becomes of vital interest to the busy practitioner to have in compact, ready form, such approved medicaments as meet the analgesic and antithermic requirements of the bulk of his patients. As pertinent we call attention to the following combination tablets: "Antikamnia and codeine," each containing $4\frac{3}{4}$ gr. antikamnia and $\frac{1}{4}$ gr. codeine, "antikamnia and quinine," each containing $2\frac{1}{2}$ gr. antikamnia and $2\frac{1}{2}$ gr. quinine, "antikamnia and salol," each containing $2\frac{1}{2}$ gr. antikamnia and $2\frac{1}{2}$ gr. salol, and "antikamnia, quinine, and salol," each containing 2 gr. antikamnia, 2 gr. quinine, and 1 gr. salol. These together with the well-known "antikamnia tablets," of varied sizes, and "antikamnia powdered," constitute indispensable factors in the armamentarium of the physician, and are more than ordinarily indicated in present climatic conditions.

Park, Davis & Co., with their usual masterly enterprise, have already on the market a supply of antitoxin. They have established a bacteriological department, and begun new investigations in this fascinating field.

The experience of every person confirms the value of *trional* and *phenacetine* as narcotics of rare powers. The literature of the subject is already quite large. W. H. Schieffelin & Co. of New York city are the American agents for this drug, and will forward papers to any address.

Wheeler's Tissue Phosphates is a very strong combination of lime, sodium, iron, phosphate, cherry bark, and calisaya. Practically, it is almost a specific in many cases.

Horsford Acid Phosphate, like the song of the brook, "goes on forever." Its value grows with the years, and its uses widen, until the demand has now reached such proportions that a vast manufactory and an army of men are required to supply it.

Celerina is a standard remedy in all cases of exhaustion coming from alcohol and narcotic drugs. The Rio Chemical Co. of St. Louis have done excellent service to the profession by placing this remedy where it can be used and tested. We urge a careful trial of it in these cases.

The Vernon House at Bronxville, N. Y., under the care of Dr. Granger, is an admirable place for mental and alcoholic cases. Each case receives special personal care.

Fire-Proof Safes have become a necessity in every institution and in every case where valuable papers are kept. E. C. Morris & Co. of Boston, Mass., make a specialty of safes of all kinds. Send for a circular.

Fellows' Syrup of Hypophosphites is a rare preparation for building up the brain and nervous system, and one of the few remedies that are usually prescribed very freely after having been once used by the physician.

The *Arethusa Spring Water* of Seymour, Conn., is an excellent water for nervous invalids, and grows in popularity wherever it is used. Send for some circulars.

Horlick's Malted Milk is an excellent nutrient for debility and exhaustion. It can be used on the table as a substitute for food with the most satisfactory results. It is milk combined with malted barley and wheat, and rich in phosphates. Send for a package.

NERVOUS EXHAUSTION.

Horsford's Acid Phosphate.

Recommended as a restorative in all cases where the nervous system has been reduced below the normal standard by overwork, as found in brain-workers, professional men, teachers, students, etc.; in debility from seminal losses, dyspepsia of nervous origin, insomnia where the nervous system suffers.

It is readily assimilated and promotes digestion.

Dr. Edwin F. Vose, Portland, Me., says: "I have prescribed it for many of the various forms of nervous debility, and it has never failed to do good."

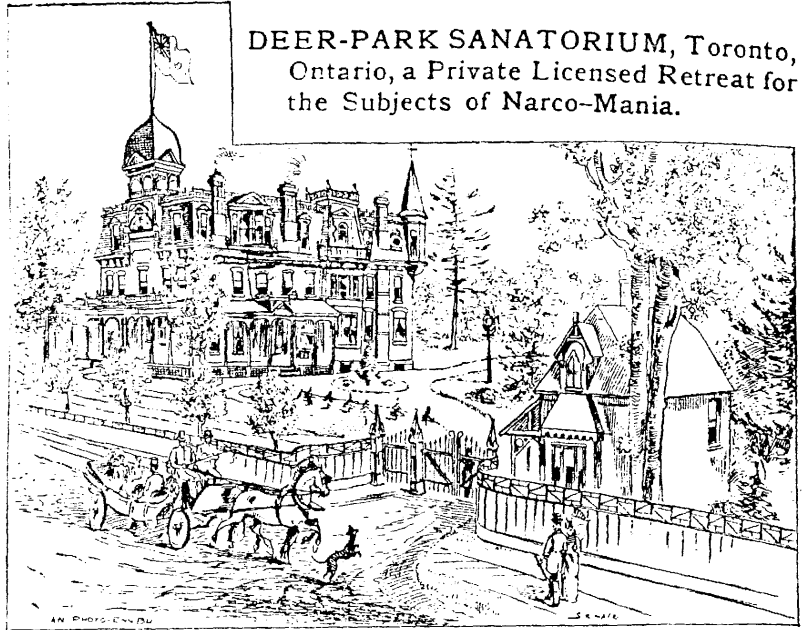
Send for descriptive circular. Physicians who wish to test it will be furnished upon application with a sample by mail, or a full size bottle without expense except express charges.

Prepared according to the directions of Professor E. N. HORSFORD, by the

RUMFORD CHEMICAL WORKS, Providence, R. I.

Beware of Substitutes and Imitations.

DEER-PARK SANATORIUM, Toronto,
Ontario, a Private Licensed Retreat for
the Subjects of Narco-Mania.



DEER PARK SANATORIUM, Toronto

A Private Licensed Retreat for the Subjects of Inebriety or Narco-Mania.

President :

B. HOMER DIXON, K. N. L.
Consul-General of the Netherlands.

Medical Superintendent :

C. SCHOMBERG ELLIOT, M.D., M. C. P. & S.,
*Member of the American Association for the
Study and Cure of Inebriety, New York,
For three years Examiner in Medical Jur-
isprudence and Sanitary Science for the
College of Physicians and Surgeons,
Ontario.*

Vice-Presidents :

D. W. ALEXANDER, Esq.,
HON. CHAS. DRURY,
Ex-Minister of Agriculture.

is situated at Deer Park, one of the most healthful and beautifully situated suburbs of Toronto, on the high lands immediately skirting the northern limits of the city, and commanding a magnificent view of Lake Ontario and the Queen City of the West. The neighborhood abounds in richly wooded glens and dales and elevated summits, interspersed with gardens, groves, and orchards, with lovely walks and drives in all directions. It is situated in ample grounds, which are adorned by trees, shrubs, and flower gardens, with extensive bowling green and lawn tennis court, and it is very accessible, being not more than two minutes' walk from the Metropolitan Electric Railway on Yonge Street, and only ten minutes from the Toronto Street Cars.

All the surroundings are made so pleasant and attractive that patients will not be subjected to that feeling of social degradation which is commonly experienced in public institutions.

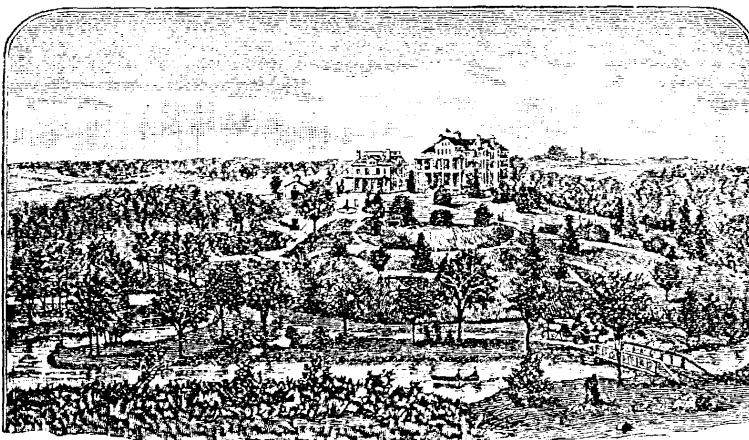
The Board of Management recognize the fact that the sufferer from the insatiable craving for alcohol and other narcotics is the victim of disease, and every means known to medical science will be employed for its eradication.

Patients are admitted upon their voluntary application, or may be committed by the County Judge, under the provisions of the R. S. O., Chap. 240, secs. 100 to 111.

For Forms of application and all necessary information, Address

C. SCHOMBERG ELLIOT, M.D.,
Deer Park Sanatorium, Toronto.

Milwaukee Sanitarium for Nervous Diseases.



The Sanitarium is beautifully located in the country, three miles from the city of Milwaukee. It is within a few minutes' walk of the Chicago Milwaukee & St. Paul depot, but is in a quiet and retired spot, where patients have the freedom of a large park, without observation or intrusion.

The institution is designed for the treatment of nervous disorders and mild cases of insanity.

The buildings are new and were constructed for the special purpose of a Sanitarium. They are heated by steam and lighted by electricity, and the entire sanitary arrangements of the institution are the best.

Each patient is provided with a separate room, and skilled nurses are always in attendance.

It has been the constant endeavor to make the Sanitarium assimilate as nearly as possible, to a home, with few of the characteristics of an institution, and with every diversion that can contribute to the entertainment and improvement of the patients. For information address the Medical Superintendent

J. H. McBRIDE, M.D.,
Wauwatosa, Milwaukee Co., Wisconsin.

The Review of Insanity and Nervous Disease.

This is a quarterly journal issued in September, December, March, and June. Each issue contains one original article, the remainder of the journal being devoted to abstracts from the literature of the specialty from

—† ALL LANGUAGES. †—

The selections embrace every department of
NEUROLOGY AND PSYCHOLOGY,

Including ANATOMY, PHYSIOLOGY, PATHOLOGY, and THERAPEUTICS. Articles are SIMPLIFIED and CONDENSED, so that the reader is furnished with the ENTIRE LITERATURE OF THE SPECIALTY in the briefest possible space. The journal is especially adapted to the wants of the GENERAL PRACTITIONER. Published quarterly at Milwaukee, Wis.,
by
JAMES H. McBRIDE, M.D.

Pharmaceutical Products of
The Farbenfabriken vorm. Friedr. Bayer & Co.,

Somatose

A MEAT NUTRIENT IN
POWDER FORM

SOMATOSE consists of the Albumoses, or nourishing elements of meat, and the nutrient salts. It is tasteless, odorless, soluble, and is

RAPIDLY ASSIMILATED

in the organism. Somatose is useful in fevers, gastric affections, phthisis, anæmia, and as an infant food. Supplied in two ounce, quarter, half and one ounce tins; also combined with cocoa and chocolate, and in form of crackers.

Troinal

HYPNOTIC NEUROTIC
SEDATIVE

TRIONAL has given excellent results in simple insomnia, especially the sleeplessness of neurosthenic persons. It produces refreshing sleep.

DEVOID OF AFTER-EFFECTS, and is prompt and effective. In mental diseases, alcoholic delirium, and narcotic habits, Troinal is highly esteemed as a hypnotic and sedative. When pain exists Troinal may be combined with Phenacetine. Supplied in ozs. and tablets.

Aristol

ANTISEPTIC CICATRISANT
ANÆSTHETIC

LYCETOL
SOMATOSE
LOSOPHAN
TANNIGEN
PHENACETINE
SALICYLIC ACID
PIPERAZINE-
BAYER

ARISTOL is a convenient, agreeable and effective dressing in general surgery, diseases of the eye, ear, nose, and in burns. It forms an

UNIRRITATING AND PROTECTIVE coating over wounds and diseased membranes, to which it adheres closely, and promotes rapid healing. Aristol may be employed in powder, or in the form of ointments, oils, collodions, or ethereal solutions. It is supplied in ounces only.

ARISTOL
TRIONAL
SULFONAL
EUROPHEN
SALOPHEN
ANTINONNIN
EUROPHEN-
ARISTOL

Losophan

ANTIMYCOTIC DERMIC
STIMULANT

LOSOPHAN or Triiodocresol has given excellent results in the treatment of ringworm, scabies, pityriasis versicolor, in which it rapidly

DESTROYS THE PARASITE

and effects a cure. It is also indicated in chronic eczema, sycosis, acne and pediculosis. Losophan should be thoroughly dissolved in oils, and not simply combined with ointments. It is supplied in ounces only.

Phenacetine-Bayer

ANTIPYRETIC ANALGESIC
ANODYNE

PHENACETINE-BAYER is indicated in all acute, inflammatory, febrile conditions, and all forms of pain. It is the safest, while the **MOST ACTIVE AND RELIABLE** of the antipyretics and analgesics. It has proved invaluable in influenza. Phenacetine-Bayer is supplied in ounces, tablets, and pills; also in pills and tablets combined with Salophen, Sulfonal, quinine, caffeine, etc.

Full Descriptive Pamphlets sent on Application.

W. H. Schieffelin & Co., New York.

DISEASES OF INEBRIETY

FROM
ALCOHOL, OPIUM, and other NARCOTIC DRUGS.
Its Etiology, Pathology, Treatment,
AND
MEDICO-LEGAL RELATIONS.

By the American Association for the Study and Cure of Inebriety.

THIS Association, composed of eminent physicians of this country and Europe, has for a quarter of a century studied the scientific side of Inebriety—for 22 years it has held its annual and semi-annual meetings, at which the subject in its general and special phases has been ably discussed. It has of late attracted renewed attention growing out of the empiric assumptions that specific remedies have been found for its cure; as a *sequence*, an increasing demand has appeared for the grouping of the studies of scientific men in this field, and for the legitimate inferences therefrom as to Inebriety itself and the proper treatment thereof.

At the November meeting of the Association, its Secretary T. D. CROTHERS, M.D., was instructed to prepare this volume from the vast fund of material in its possession which demonstrates that Inebriety is a disease and that it is curable as other diseases are.

The following is a Synopsis of its contents comprised in 38 Chapters :

PAGE	PAGE		
CHAPTER I.—Early history of the Theory of Disease in Inebriety.....	17	CHAPTER XXI.—Treatment.—Its Nature and Plan.....	213
CHAPTER II.—Theory in Modern Times.—Its Scientific Study.....	21	CHAPTER XXII.—Inebriate Asylums and their Work.....	230
CHAPTER III.—Different forms of Inebriety.—Classes of Inebriates.....	26	CHAPTER XXIII.—Hygienic Treatment.	141
CHAPTER IV.—Dipsomania.—Its Varieties.	28	CHAPTER XXIV.—Duty of the State....	252
CHAPTER V.—Philosophy and Etiology...	38	CHAP. XXV.—Care of Pauper Inebriates	254
CHAPTER VI.—Inebriate Diathesis.....	47	CHAPTER XXVI.—Medico-legal Considerations.....	275
CHAPTER VII.—Predisposing Causes....	55	CHAPTER XXVII.—Rulings of Judges and the Law.....	286
CHAPTER VIII.—Traumatism and Injury.	67	CHAPTER XXVIII.—Irresponsibility in Inebriety.....	294
CHAPTER IX.—Adversity, Sunstroke, Heat, and other Causes.....	80	CHAPTER XXIX.—Special Forms of Irresponsibility, trance, etc.....	305
CHAPTER X.—Inebriety in America....	91	CHAPTER XXX.—Relations of inebriety, Coma, and Brain Disease.....	316
CHAPTER XI.—Mortality of Inebriety.—Fatality in Epidemics.....	100	CHAPTER XXXI.—Inebriety from Opium.	326
CHAP. XII.—Inebriety and Consumption	103	CHAPTER XXXIII.—From Ether.....	341
CHAPTER XIII.—Effects of Alcohol and Beer on the Mental Functions.....	113	CHAPTER XXXIV.—From Cocaine....	349
CHAPTER XIV.—Diagnosis of Inebriety.—Study of Social Statistics.....	115	CHAPTER XXXV.—From Chloroform...	354
CHAPTER XV.—Delirium Tremens.....	131	CHAPTER XXXVI.—From Coffee and Tea	356
CHAPTER XVI.—General facts of Heredity.	145	CHAPTER XXXVII.—Psychosis caused by Nicotine.....	367
CHAPTER XVIII.—Statistics of Heredity.	183	CHAPTER XXXVIII.—Arsenic and Ginger	377
CHAPTER XIX; XX.—Pathology, &c....	193		

One Large 8vo Volume, Morocco Cloth, 400 Pages, \$2.75.
E. B. TREAT, Publisher, 5 Cooper Union, New York.

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 ange 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. Folsom, 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 Alienist and Neurologist, 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 In- sane Asylum, Washington, D. C.
Wm. A. Hammond, M. D., 43 West 54th St., New York.	Clark Bell, Esq., editor of the Medico-Legal Journal, New York City.
G. Webber, M. D., 133 Boylston St., Bost'n.	T. D. Crothers, M. D., Hartford, Conn.

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 Glyceric, *acceptable to the most irritable conditions of the stomach.* Bone Calcium Phosphate, Ca_2PO_4 ; Sodium Phosphate, Na_2HPO_4 ; Ferrous Phosphate, Fe_3PO_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.



CAN I OBTAIN A PATENT? For a prompt answer and an honest opinion, write to MUNN & CO., who have had nearly fifty years' experience in the patent business. Communications strictly confidential. A Handbook of Information concerning Patents and how to obtain them sent free. Also a catalogue of mechanical and scientific books sent free.

Patents taken through Munn & Co. receive special notice in the Scientific American, and thus are brought widely before the public without cost to the inventor. This splendid paper, issued weekly, elegantly illustrated, has by far the largest circulation of any scientific work in the world. \$3 a year. Sample copies sent free.

Building Edition, monthly, \$2.50 a year. Single copies, 25 cents. Every number contains beautiful plates, in colors, and photographs of new houses, with plans, enabling builders to show the latest designs and secure contracts. Address
MUNN & CO., NEW YORK, 361 BROADWAY.

ABBOTT'S Dosimetric Granules

Of the Alkaloid and other active principles are acknowledged by critical clinicians as the highest product of modern pharmacy. Purity, accuracy, and solubility guaranteed. Special Granules made to order on short notice. Unsolicited evidence.

The Times and Register, of Philadelphia, July 22, 1892:

"Dr. W. C. Abbott's Dosimetric Granules have been used by several members of our staff. The Granules have proved reliable in every respect; uniform, well made, and of full strength. The system is popular with patients."—WAUGH.

PALMYRA, IOWA, Oct. 31, 1892.

DR. W. C. ABBOTT, Ravenswood, Chicago, Ill.

Dear Doctor,—Inclosed find order. I am well pleased with the purity of your Granules. They seem to be uniform and up to the standard. We are now having Typhoid Fever to contend with, and your Granules work well in those cases.

Fraternally,

J. D. BLAKE.

BROWNSVILLE, MD., April 12, 1892.

DR. W. C. ABBOTT, Chicago, Ill.

Dear Doctor,—Enclosed please find order for Granules. I would say in this connection that I now have been practicing Dosimetry for two years—have used the various Granules made at home and abroad, and find yours the very best. "Chautaud's" not excepted. Keep them to their present standard, and if once used others will never be substituted.

Truly, etc.,

J. T. YOURTEE, M.D.

HAZLEHURST, MISS., Nov. 29, 1892.

DR. W. C. ABBOTT:

Find enclosed order for Granules. . . . I bought my first Granules from you and was well pleased with them, but after reading the books on this method by Dr. Burgegræve, I decided to use the Chautaud Granules, at least until I should become more familiar with their use. I have ordered through my druggist more than \$150.00 worth, but I found them quite costly and especially to my patients when the druggist's profit is added to the first cost.

I expect in the future to keep and carry my own granules instead of sending my patients to the druggists, and you may expect to receive my orders.

Yours truly,

A. B. PITTS.

✍ Write for samples and special introductory offers. Direct dealing admits of prices unapproached by others.

DR. W. C. ABBOTT.

RAVENSWOOD, CHICAGO, ILL.

“SLEEPY OREGON.”

Trade winds, Japan current, low altitude, quiet and humid atmosphere, are among the causes which have given the latitude of Western Oregon its well known sleep-producing qualities, so refreshing to the nervous and mentally sick.

MINDSEASE,

AN ORGANIZATION OF

Cottage Homes

FOR TREATMENT OF

Nervous and Mental Diseases.

Patients treated upon the separate home plan; modern methods. For particulars address

HENRY W. COE, M.D.,

Neurologist to Portland Hospital, etc.

Office: The Marquam, - - - - - Portland, Ore.

The Medical Sentinel,

PORTLAND, OREGON:

THE MEDICAL SENTINEL is purely a local journal. It is full of matter of interest to the doctors of this great Pacific Northwest Region. Local papers, local editorials, local personals, local society matters. Every live doctor of this region feels that he can hardly keep medical house without it. Physicians living remote from this region, who desire to know just what the doctors here are doing, and what the possibilities here are, can find out only by means of the MEDICAL SENTINEL.

The MEDICAL SENTINEL does not pretend to take the place of the general or local or special periodicals of other regions. This is the great northwest journal, covering a larger territory and reaching more physicians on the frontiers and in the phenix-like towns than any other journal of the world. Send to Dr. Coe, Editor, for a sample copy. Address Portland, Oregon.

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.
Beard, Sexual Neurasthenia. \$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.
Starr, Familiar Forms of Nervous Diseases. \$3.00.
Levinstein, Morbid Craving for Morphine. \$3.25.

G. P. PUTNAM'S SONS,
27 AND 29 WEST TWENTY-THIRD STREET, NEW YORK.
Charcot, Spinal Cord. \$1.75.

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

- 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.
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

- Ross**, Diseases of the Nervous System. \$4.50.
Savage, Insanity and Neuroses. \$2.00.
Hamilton, Nervous Diseases. \$4.00.
Mitchell, Diseases of the Nervous System. \$1.75.

WILLIAM WOOD & CO.,
56 AND 58 Lafayette Place, New York.

- Blandford**, Insanity and its Treatment. \$4.00.
Branewell, Diseases of the Spinal Cord. \$6.00.
Rosenthal, Diseases of the Nervous System. \$5.50.

D. APPLETON & CO.,
1, 3, AND 5 Bond Street, New York.

- 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,
5 Cooper Union, New York City.

- Spitska**, Insanity; Its Classification, Diagnosis, and Treatment. \$2.75.
Beard, Nervous Exhaustion. \$2.75.
Corning, Headache and Neuralgia. \$2.75.
Wright, Inebriism from the author, Bellefontaine, Ohio. \$1.50.

PROTECT YOUR PRACTICE.

THE PHYSICIANS' MUTUAL
 MANUFACTURING COMPANY

Sell direct to Physicians at lowest prices, for cash.

Does not sell Druggists.

COMPARE OUR PRICES

Quinine in Tablets, 1-2-3-5 gr., 40 cents per ounce.

	Per 1,000	COMPOUND TABLETS.	Per 1,000
Acetanalid,	1 gr. 56c; 3 gr. 83c; 5 gr. \$1.35	Gold and Arsenic Bromides,	\$5.00
Calomel,	1-10 gr. 64c; 1/2 gr. 75c; 1 gr. 75c	Uterine Tonic (Buckley),	1.90
Potass. Bromide,	5 gr. \$1.00	Gonorrhoea,	1.90
Soda Bromide,	5 gr. \$1.25	Aloin Atropine Strychnine Cascarin,	2.25
Potass Permanganate, 1 gr. 75c; 2 gr. 75c; 3 gr. 75c		Antiseptic Seilers,	2.25
Sulphur,	1 gr. 65c; 5 gr. 75c	Antiseptic Bernay,	1.31
Pepsin,	1 gr. \$1.00; 2 gr. \$2.00	Bismuth and Calomel Comp.,	1.31
Paregonic, 10 min.,	83c	Brown Mixture, . . . . .	.83
Opium,	1/2 gr. 80c; 1 gr. \$1.00	Calomel and Soda, . . . . .	.94
Manganese Binox.,	1/4 gr. 60c; 1 gr. 75c	Damiana Compound,	2.25
Mercury Protidide,	1/4 gr. 60c	Emmenagogue,	2.25
Ipecac,	1/4 gr. 80c	Four Chlorides,	2.63
Zinc sulpho-carb. 1 gr. 60c; 2 gr. \$1.10; 5 gr. \$1.50		Hammonds Tonic,	1.31
Codeine,	1-5 gr. \$4.00; 1/2 gr. \$4.75	Hypophosphite Comp.,	3.75
Copper Arsenite,	60c	Iron and Mercury Comp., . . . . .	.64
Podophyllin,	1/4 gr. 75c	Iron, Quinine, and Strychnine,	1.32
Cocaine,	1-10 gr. \$3.00	Rheumatic,	1.90
		Hepatic (Kenyon), . . . . .	.64
		Acetanalid, Caffeine and Sodium,	2.00
		Aromatic Digestive,	3.00
		Cactus, Grand and Digitalis,	1.75

STRYCHNINE Sulphate, Nitrate, Hypophosphite, Arseniate, Valerianate, any size tablet or granule, 50c per thousand.

Everything listed by others at lower prices.

Write for list and prices on private formula.

Physicians' Mutual Manufacturing Co.,

358 DEARBORN ST., CHICAGO.

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.

ARETHUSA SPRING WATER

Purest of Table Waters.

FLOWS from a side hill at Seymour, Conn., free from all contaminating surroundings. A truly remarkable water, soft and pure, containing but $\frac{1}{17}$ of 1 per cent. of mineral matter, most all of which is soluble.

Prof. Chittenden of Yale University has made an analysis of "Arethusa" which we are very glad to mail to anyone on application.

"Arethusa" is sold only in glass. Still in one-half gallon bottles and five-gallon demijohns.

Carbonated, in pints and quarts.

The still or natural water is indicated in kidney and bladder troubles.

Carbonated indicated in dyspepsia, diseases of the stomach, and nausea.

Pure water is nature's remedy. If any special drug is indicated, you can use it with "Arethusa" to great advantage.

Our offer of a case of water to any physician in regular practice is open for acceptance.

ARETHUSA SPRING WATER CO.,
SEYMOUR, CONN.

HOMWOOD RETREAT, Guelph, Ont., Canada.

JOSEPH WORKMAN, M. D., | STEPHEN LETT, M. D.,
Consulting Physician. | *Medical Superintendent.*

A PRIVATE ASYLUM FOR THE CARE AND TREATMENT OF THE
INSANE, INEBRIATES, AND THE OPIUM HABIT.

This admirably appointed and salubriously-situated retreat, whilst possessing all the advantages of a larger institution, enjoys the privacy and quietness of a gentleman's residence.

THERE ARE A FEW VACANCIES FOR BOTH MALE AND FEMALE PATIENTS.

FOR PARTICULARS ADDRESS,

DR. LETT,
GUELPH, ONT.

FALKIRK,

JAMES FRANCIS FERGUSON, M.D. DAVID H. SPRAGUE, 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.

RIVER VIEW HOME.

A Sanitarium on the Hudson River.

ADVISORY BOARD.—Prof. H. MARION SIMS of New York. Prof. T. GAILLORD THOMAS, of New York. Prof. SENECA D. POWELL, of New York. Prof. W. M. A. HAMMOND, Ex-Surgeon General, U. S. A., Washington, D. C. Dr. T. D. CROTHERS, of Hartford, Conn. Ed. of *American Journal of Inebriety*.

For NERVOUS DISEASES and OPIUM CASES, mild mental and select alcohol cases. A Home for Invalids or Convalescents. Strictly on the family plan. Hour and half from New York. Charming scenery and healthy location. For circulars and terms, address, RIVER VIEW HOME, Fishkill-on-Hudson, N. Y., W. S. WATSON, M. D., C. M. KITTREDGE, M. D., Proprietors.

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.

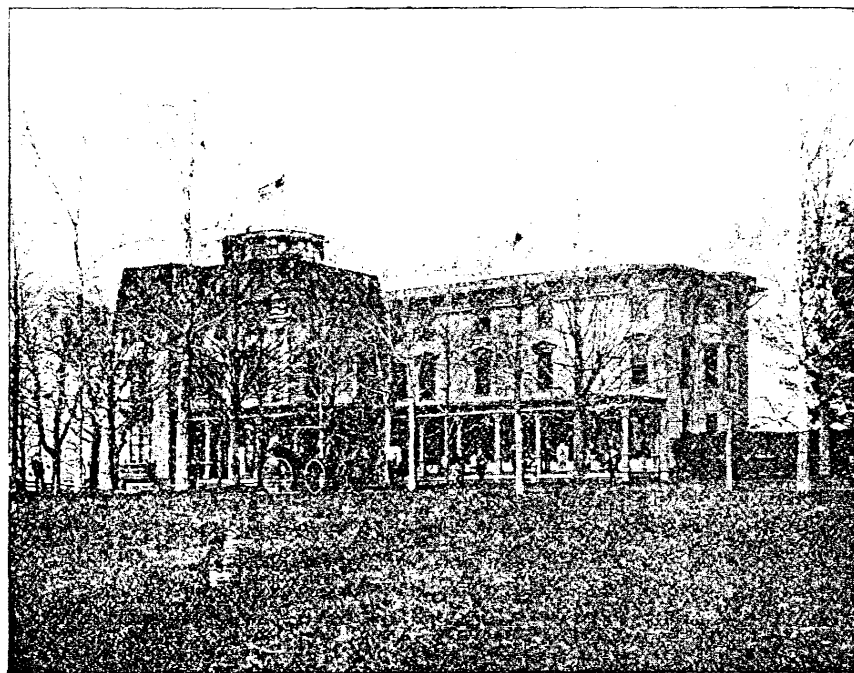
ANTITHERMIC ANALGESICS
IN
PAIN! MALARIA! GERMS!
ESPECIALLY INDICATED OUR
"ANTIKAMNIA QUININE AND SALOL TABLETS"
(CONTAINING, 2 GR. ANTIKAMNIA, 2 GR. SULPH. QUININE, 1 GR. SALOL.)

ANTIKAMNIA—Powdered and Tablets. Antikamnia and Codeine Tablets, (4 $\frac{1}{2}$ gr. Antikamnia and $\frac{1}{2}$ gr. Codeine.) Antikamnia and Quinine Tablets, (2 $\frac{1}{2}$ gr. Antikamnia and 2 $\frac{1}{2}$ gr. Quinine.) Antikamnia and Salol Tablets, (2 $\frac{1}{2}$ gr. Antikamnia and 2 $\frac{1}{2}$ gr. Salol.)	OUR TABLETS CONSIST OF THE MEDICINAL INGREDIENTS ONLY, COMPRESSED WITHOUT ANY EXCIPIENT. THEIR PROMPT DISINTEGRATION AND ASSIMILATION GIVE CERTAINTY AND CELERITY OF EFFECT. The Antikamnia Chemical Company St. Louis Mo.
---	--

(SAMPLES ON APPLICATION.)

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 Saline 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.

THE AMERICAN JOURNAL OF INSANITY.

(ESTABLISHED IN 1844.)

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

**Inebriety and Insanity will Receive Frequent Attention
IN ITS COLUMNS.**

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 AMERICAN JOURNAL OF INSANITY has recently been purchased by the American Medico-Psychological Association, from the State Hospital, at Utica, N. Y., where it had been published for fifty years, and removed to Chicago.

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.

PUBLICATION COMMITTEE.

EDWARD COWLES, Somerville, Mass. (McLean Hospital), President
American Medico-Psychological Association.

HENRY M. HURD, M.D., Baltimore, Md. (Johns Hopkins Hospital).

RICHARD DEWEY, M.D., Chicago.

SUBSCRIPTION PRICE,
\$5.00 PER ANNUM,
IN ADVANCE.

ADDRESS RICHARD DEWEY, M.D.,
Managing Editor,
Venetian Building,
34 Washington St., CHICAGO, ILL., U. S. A.

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., 1012 Walnut Street, PHILADELPHIA. BAILLIERE, TINDALL & COX,
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 also are 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. 3, 1894.

**THE STANDARD HYPNOTIC,
BROMIDIA.**

Dose—One-half to one fld. drachm in water or syrup.

**THE STANDARD ANODYNE,
PAPINE.**

Dose—One fld. drachm, represents $\frac{1}{8}$ gr. morphia in anodyne principle, minus its constipating effect.

**THE STANDARD ALTERATIVE
IODIA.**

Dose—One or two fld. drachms as indicated.

Clinical reports from eminent physiclans throughout the World furnished on application.

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.

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. XVII.

APRIL, 1895.

No. 2.

HARTFORD, CONN.:
THE CASE, LOCKWOOD & BRAINARD CO.,
PRINTERS.

EUROPEAN AGENCY:

BATHURST, CORNAGE & CO.,
10 KING WILLIAM STREET, IN THE STRAND, LONDON, W.C.

Subscription \$2.00 Per Year.

TABLE OF CONTENTS.

APRIL, 1895.

	Page.
THE RELATION OF THE MEDICAL PROFESSION TO TEMPERANCE LEGISLATION. PROF. AUSTIN ABBOTT, LL.D.,.....	101
POPULAR FALLACIES AS TO ALCOHOL AND NICOTINE. ALBERT R. LEDOUX, M.S., PH.D.,.....	111
OPIUM IN GYNECOLOGY. DR. JOSEPH PRICE,.....	125
DUTY OF THE PROFESSION IN INEBRIETY. DR. H. N. MOYER,.....	128
TEA AND ITS EFFECTS. DR. JAMES WOOD,.....	134
UNWHOLESOME WORKSHOPS AND DRINK. DAVID WALSH, M.B.,.....	144
AUTO-TOXÆMIA IN DRUG HABITS. DR. W. F. WAUGH,.....	152
ANNUAL REPORT OF WALNUT LODGE HOSPITAL, HARTFORD, CONN.,...	156
REPORT OF THE MASSACHUSETTS INEBRIATE HOSPITAL AT FOXBORO, MASS.,.....	162
MEDICAL INSTRUCTION OF INEBRIETY IN COLLEGES. DR. T. D. CROTHERS,.....	171
ABSTRACTS AND REVIEWS	
ENGLISH INEBRIATE HOSPITALS,.....	176
UNUSUAL CASE OF MORPHINE INEBRIETY,.....	189
EDITORIAL:	
DELUSIONAL INEBRIATES.....	188
OPIUM DELUSIONS,.....	190
PHYSICAL HISTORY OF THE DRINK PROBLEM,.....	192
STRYCHNINE DELIRIUM,.....	196
THE SAN FRANCISCO HOME FOR INEBRIATES,.....	197
CLINICAL NOTES AND COMMENTS,.....	199

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.

VERNON HOUSE. For the Private Care and Treatment of Mental and Nervous Diseases, Alcoholism, Opium, and other like Diseases of Habit.

Admission limited to Poor Patients, offering most constant and careful supervision of each case. The treatment is of the most scientific and up-to-date character, and the surroundings are of the most pleasant and comfortable. The patients are under the personal supervision of the physician, and the treatment is of the most successful character. The patients are under the personal supervision of the physician, and the treatment is of the most successful character. The patients are under the personal supervision of the physician, and the treatment is of the most successful character.

Wm. D. GRANGER, M.D.
BRONXVILLE, N. Y.

Journal of Inebriety.

A Prominent Physician

HAPPILY CHARACTERIZES THE DUAL ACTION OF "MALTINE WITH COCA WINE," IN THE FOLLOWING GRAPHIC MANNER "THE COCA BOOSTS THE PATIENT AND THE MALTINE FURNISHES THE PEG THAT PREVENTS HIM FROM SLIPPING BACK."

Other tonics afford only temporary stimulation with nothing to prevent the subsequent reaction.

An eight-ounce bottle of "Maltine with Coca Wine" and an eight-ounce bottle of any other preparation selected from the list of Maltine Preparations will be promptly sent to any physician signifying a willingness to defray mere express charges.

THE MALTINE MANUFACTURING CO.,
168 Duane Street, New York.

AFTER THE REMOVAL OF ~ ~ ALCOHOL

IN the treatment of the inebriate, a stage of profound exhaustion and neurasthenia comes on, an unmasking, as it were, of a nameless variety of neuralgias and states of irritation, both physical and psychical, which tax therapeutic resources to its utmost to meet. Functional changes and perversions that are intense, complex, and very changeable, associated with organic lesions, both obscure and well-defined, not only difficult to diagnose, but more difficult to treat. These are termed, in general, states of brain and nerve exhaustion, and the usual remedies are quinine, strychnine, electricity, baths, nutrients, and other general remedies. The materia medica is constantly searched for tonics that will lessen this neurasthenic stage, and enable the patient to regain in some measure his lost control of mind and body, and rise above the mental depressions so common and agonizing. The experience of the medical profession proves that CELERINA meets these wants more positively than any other remedy.

RIO CHEMICAL CO.,

A full size bottle of CELERINA will be sent FREE to any Physician who wishes to test it, if he will pay the express charges. }

ST. LOUIS, MO.

THE
QUARTERLY JOURNAL OF INEBRIETY.

Subscription, \$2.00 per year.

Vol. XVII.

APRIL, 1895.

No. 2.

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

THE RELATION OF THE MEDICAL PROFESSION TO TEMPERANCE LEGISLATION.*

BY PROF. AUSTIN ABBOTT, LL.D., DEAN OF COLUMBIA
LAW SCHOOL, N. Y. CITY.

One of the most interesting subjects affecting the medical and legal professions just now presented by that field in which the duties of the one concur or co-operate with the duties of the other. Consider the field of these professions respectively as separate circles lying side by side. There was a time when they were wholly independent, not touching each other. The constant enlargement of the field of each profession during the last two hundred years has resulted in the overlapping of these circles so that now there is a territory which is in a sense the common domain of both. This domain is the field of medical jurisprudence in the widest sense of that term. The subjects within this field cannot be intelligently understood or efficiently dealt with by medicine alone or by law alone, they require the concurrence of these functions. This concurrence is not always harmonious; it is sometimes necessary for the law to

* Read before the New York Medical Jurisprudence Society, March 11, 1895

be instructed by the medical profession, and changes in the law which the medical profession dictate must sooner or later be conceded by the legal profession, and, on the other hand, the law frequently needs to regulate matters whose general direction is in charge of the medical profession, and to modify to some extent in view of public interest and safety what medical science might, or for abstract reasons, direct differently.

When we look at what the members of these professions are actually doing in society upon this common domain, we see two principal modes of co-operation or concurrent labor or mutual modification. In the course of justice the law, in investigating questions which involve scientific knowledge, calls on the medical profession for information and instruction, medical knowledge and medical reasoning; and the knowledge and reasoning which is the peculiar gift of the medical profession upon scientific subjects generally here is brought into the service of the law; and while, on the one hand, the law directs what inquiries may be made and in what manner and how far they shall be prosecuted, and what legal consequences shall be affixed to the conclusion which science presents, it is scientific aid and assistance which the law within these limits seeks for, and the instruction and knowledge which the medical profession give are of increasing service in the administration of justice. This is the department of forensic medicine or medical jurisprudence in the stricter sense of that term.

But we see another class or mode of co-operation between the professions in which medical men, discerning what is necessary for the welfare of the community and observing the habitual indifference of the community upon the subject, call upon the law to provide by legislation the rule of conduct and enforce it by the administration of justice. It is in this method that sanitary legislation has been so admirably developed within the present generation. This department is what we usually designate by the term state medicine. These two fields, state medicine and forensic medicine make

up the area in which the domains of the two professions overlap each other. In the first, forensic medicine—lawyers take the initiative, the law calling the physician to the aid of its administration; in the second, physicians take the initiative and the principles of sanitation in the hands of the medical profession call the lawyers to their aid for enforcement.

When we compare the relative progress of these two great movements we are struck by an interesting contrast. The law is conservative and it pursues substantially the same method now which it has from the beginning of medical jurisprudence in its use of expert testimony. Whatever advance has been made in this field has been in a great multiplication of the classes of cases in which medical testimony is called for and great increase in the number and ability of experts, and, I believe, on the whole, an increase in the respect accorded to experts who appear upon the stand to be both intelligent and impartial.

On the other hand, the department of state medicine is progressive. It is not merely doing an increasing business within the same old conservative lines. It is moving forward, extending to new subjects, discerning new needs, formulating new methods of provision or remedy, and thus giving a wholesome ascendancy over many subjects with which formerly it had no direct relation.

This notable increase of the branches of sanitary legislation will be obvious to every one upon the mere mention of quarantine and compulsory vaccination, of sewerage and drainage laws, ventilation and those parts of the building laws which have been dictated by medical opinion, and the lunacy laws, the sanction for the segregation of persons of unsound mind, and the superintendence of asylums and homes; health boards with all their various subjects of inspection and regulation, the sanitary inspection of schools, the great department of vital statistics, the growing functions of the inspectors of food products, and the prevention of adulteration, and the condemnation of that which is unfit, and

even the legal investigation of the diseases of cattle. Others present could readily name additional topics necessary to a complete view of the extent to which the medical profession are now taking the lead in originating and to some extent formulating the legislation of the state in matters affecting the general health.

It is difficult to estimate how much society owes to the influence of the medical profession caused by these and similar measures of compulsory sanitation.

In all such matters, it is important to observe that it is the judgment of the medical profession which points the way and leads. The law waits for a reasonable consensus of medical opinion. Whenever that is reached and it is made clear to the community, the law follows with legislation attempting as far as may justly be done, to give effect in the life of the community to the principles of safety and welfare upon which medical men have agreed.

This being the case, I desire to invite your attention to the relation of the medical profession to the subject of legislation respecting inebriety. I believe the time has now arrived when the community are ready to consider with candor and acquiescence what ought to be done considering inebriety as a disease. It is true that a number of the community do not believe that it is a disease, and some will persistently oppose any such view to the last; nor do I know that medical men would agree that it is always a disease. The proposition which I wish to put forward is, that the community are ready to acknowledge that to some extent, at least, inebriety may be usefully considered as a disease.

It is for the medical profession to instruct the community if anything can and ought to be done by the community through its legislature, towards diminishing its prevalence. I do not affirm that the community are ready to admit that inebriety is always a disease, but I believe that it may with confidence be affirmed that the community are ready to follow medical men in some important steps in which they may be advised that it ought to be considered as a disease and

treated as a disease. We should all agree that other elements besides pathology enter into the problem. If it be a disease, is it engendered by self-indulgence and by ignorance? Is it promoted by the profits of the traffic? Is it extended by the allurements of social attractions? Is it closely connected with other self-indulgences that are profitable to those who cater to them? It is not strange that it has thus far been treated by the law in the calendar of voluntary criminal offenses and not as a disease.

I do not suppose that the proposition to consider it as a disease would very soon, and perhaps not ultimately, terminate our treatment of it in some part as an offense, but is it not time to introduce the other element as an actual basis of the law in dealing with the subject?

The steps which appear to me to be worthy of discussion in this direction are:

First, the entire administration of the law touching inebriety as an element in those disorders which require police administration should be committed to direct medical care. Men arrested for intoxication should no longer be sent at once to prison, but in the first instance they should be committed to medical custody, and afterward go to prison, if at all, by medical consent. If such a simple change as this were made, how quickly would the medical knowledge of inebriety and the scientific methods of dealing with it become disseminated in the community and rendered practical and efficacious.

Second, the traffic in intoxicants should be subject to medical supervision to the end that adulterations and falsifications of all kinds should be stopped, and what may be more important, the foisting of intoxicants and narcotics upon people in search of health, by selling them in the guise of patent or proprietary medicines, without medical direction and without disclosure of the true nature of the preparation, should be stopped.

Third, the education of the community in a way to promote the intelligent self-government of individuals in respect

to the use of intoxicants, should be accomplished by instruction under medical supervision systematically provided for by the State in all that it has to do with education.

Some important steps have been taken in this direction as well as in regard to the prevention of adulterations ; but I believe the community has scarcely begun to avail itself of the medical guidance which it needs in those respects.

Fourth, it appears to me that the open discussion as to which method for regulation of the traffic is the best, license or taxation, should receive careful consideration from medical men, and that legislation on the question should be aided by whatever light they can give.

If I do not mistake the signs of the times, the subject of inebriety is now opening, or ready to open, as a great field for the services of medical science. Hitherto it has been treated chiefly as a private and individual question. The victim has been regarded rather as indulging in a personal vice than as suffering from an aberration and bringing physical suffering upon others. It is now seen to be a social question ; and the community, as I have said, are beginning to admit that there may be some truth in the medical view which classifies it with disease. Moral suasion has been tried and though it may have prevented much and cured some individual cases, it fails to accomplish the service which the community needs. Legal suasion or compulsion has been tried with similar inefficiency. Is it not time now that scientific suasion should be tried? It is for medical men to say what ought to be done in reference to inebriety.

It is also for them to say how much of what ought to be done is practicable to do in the present situation.

I do not think that in considering such measures we should hesitate to count on the material self interests of individuals and of the community. I believe there are large and wholesome interests in the community which would tend to support a concerted movement such as I have suggested. In the first place it is for the interest of all tax-payers to put some reasonable regulation upon the increase of inebriety.

It is not necessary to enter into figures here, but we all know that a considerable portion of the burdens of taxation caused by crime, pauperism, and insanity are attributed by medical men to inebriety as the original cause.

We know, however, that the records of institutions, founded entirely on such admissions or acknowledgments as inmates may make in regard to the habits of themselves and their ancestors are not a satisfactory basis for definite conclusions in this respect.

One question which I should like to hear medical men discuss is, whether it would be practicable for competent medical examiners by personal inspection of each case to determine (with a reasonable degree of certainty in respect to any considerable proportion of cases) that inebriety was in fact a cause of the resulting condition. The statements of those who have considered this matter most fully, appear to confirm the impression that it would be practicable to show to tax-payers that a definite and considerable proportion of their burdens come from this source.

Again, in considering the subject in a practical way we should not overlook the interest of producers, and dealers in intoxicants, to stop adulterations and falsifications. We must of course assume that the traffic will go on, but it is a legitimate question how far adulterations and falsifications, which probably are now practiced on a very large scale, are a cause of degeneracy and mortality which the medical profession should greatly diminish if they were provided with suitable legislation. I am aware that there is a difference of opinion as to whether the common adulterations are detrimental to health, but I suppose there is a general agreement as to the injurious effects of intoxicants sold as patent medicines.

Again, I believe it could be shown that it is for the interest of organized labor, which is becoming so large a feature in the social question, to promote moderation in the use of intoxicants. If I am not misinformed, one difficulty with which the leaders in labor movements have to deal

arises from the tendency to excess so common among wage earners as well as among others.

It would certainly be also in the interest of the medical profession if the charge of the administrative law in reference to inebriety upon the basis of the public treatment of it as a disease should be devolved upon medical men. The advantages of scientific investigation thus rendered practical may readily be appreciated.

The importance of this subject appears to me greater than the mere question of inebriety. The law is now necessarily treating crime as well as inebriety almost wholly on the basis of punitive measures applied only after the evil has been done. Medical science alone can instruct the community how to deal with either by measures directed toward diminishing the sources. It would be futile in the present state of public opinion to propose measures for prophylactic treatment of crime, but is it premature to propose such measures in a practical form in respect to dealing with inebriety and would not the demonstration of the wisdom and propriety of such measures in that regard lead the way as fast and as far as may appear desirable to similar measures.

There appears to be good foundation for the opinion that sooner or later both crime and inebriety will be considered and tried in the light of medical science as well as of punitive justice. Now it is only a few cases comparatively in which the law calls in the medical profession, sooner or later the presumption and burden of proof must be shifted whenever it shall be made the duty of the medical profession to take charge of all accused and determine what, if anything, may be done for them or properly attempted considering the criminal as diseased, and turning over to the punitive authorities of the law those cases for which scientific treatment has no advice to give. Then and not until then will our penology be put upon its true and ultimate basis.

Let me add a few words as to the position which the legislative question as to liquor legislation now seems to occupy

in the community under our statute. In a country consisting, as ours does, of a number of States which regulate their own internal affairs in their own way, the legislature of each State becomes a sort of experiment station legislation. Ohio tries one plan, Maine tries another, New York a third, and South Carolina a fourth, and others consider plans, and adopt those which are modifications and adaptations of those mentioned.

The four leading plans which in one or another form seem to be the only ones necessary to consider, are :

First, licensing as in this State ;

Second, making the business free to all comers but imposing a tax in addition to ordinary taxation ;

Third, prohibition, with or without local option as to its adoption ;

Fourth, government monopoly of the traffic.

The question now uppermost in the minds of the most intelligent and most influential men in shaping the policy of this State, I believe, suggests a consideration of these plans in the following order :

First, local option, in each town or ward and possibly in each election district, as to whether the business shall be allowed there, and if allowed, whether Sunday sales shall be permitted ;

Second, if and where the business is allowed, is a license to be granted to selected applicants on payment of a fee, or should a tax be levied upon all who enter the business? Which is the preferable method of making the business contribute to relieve the burdens of taxation ?

Third, is government monopoly an experiment worth trying in our present condition ?

I believe it is within the power of the medical profession, by considering these and kindred questions in the light which comes from regarding inebriety as a disease, and by giving the community the benefit of their views in that aspect, to introduce a new and most wholesome element into the discussion, take the subject out of the control of polit-

ical interests and the depressing influence resulting from the present association of inebriety with crime, and lead the way to the dissemination of a better knowledge of the real uses of intoxicants in the community and to the formulation of such legislation as may be necessary, and practically enforceable, to protect the community against those excesses which now afflict so many lives and homes and which form so serious an obstacle to the prosperity and welfare of our people. Individual medical men may be wedded to peculiar opinions, but a consensus of medical judgment as to what by general agreement is reasonably necessary and practicable would, I believe, and ought, I am sure, to control and direct the course of legislation in a way in which, without trenching on individual liberty, the best interests of individuals and of society at large would be promoted.

Do not let me be understood as advocating an extension of interference by the law in reference to the drinking habits of society. On the contrary, I believe that medical opinion would guard efficiently against that. My proposition is simply this, that so far as the law does undertake or propose to interfere with questions of inebriety, the manner and the extent should be subject to medical opinion.

The first step, perhaps, in applying the principles I have suggested would be to establish within convenient access of every police precinct a correctional hospital, and to provide that whenever under existing law a person is taken into custody as intoxicated or disorderly, that is to say, without any specific charge of crime other than disturbing the peace or intoxication, he should be sent in the first instance to the correctional hospital, and there it should be determined by medical authority whether he should be turned over to the ordinary punitive justice.

ALL inebriates suffer from poisoning, auto-intoxications, starvation, and exhaustion. A large proportion of inebriates have mal-formed defective nerve centers, and suffer from exhaustion and debility before spirits are taken.

POPULAR FALLACIES AS TO ALCOHOL AND
NICOTINE.*

BY ALBERT R. LEDOUX, M.S., PH.D.

Mr. President and Gentlemen: There is probably no subject connected with human habits and appetite that has been so much discussed as the use or abuse of tobacco and alcohol. The controversies which have raged over these two substances have been continuous, although on ever-shifting grounds. I desire to state at the outset of this brief paper that the members of the Society of Medical Jurisprudence need have no apprehension that they are about to be compelled to listen to an appeal for prohibition, on the one hand, or that I shall seek to enlist the society in the movement for freer saloons or unrestricted license.

It is my purpose to consider the problems surrounding the alcohol and tobacco questions from the standpoint of an analytical chemist, rather than that of either a temperance reformer or advocate of license; a devotee of the "weed" or an anti-tobacco man.

I may dismiss the moral and ethical consideration with a few words, leaving this to be discussed by others, and this paper may perhaps in some measure clear the way for that distinguished jurist, Dr. Austin Abbott, who will at our next meeting consider the relations of alcohol to crime.

The few words with which I will dismiss the moral and ethical side of the question will be: "There is something to be said on both sides." Probably no one has better stated the relative merits and demerits of tobacco than Burton, who, in his "Anatomy of Melancholy," says: "Tobacco, divine, rare, super-excellent tobacco, which goes far beyond all the panaceas, potable gold, and philosopher's stones; a sovereign remedy in all diseases. A good vomit, I confess.

* An address delivered at the February meeting of the Society of Medical Jurisprudence, 1895.

a virtuous herb if it be well qualified, opportunely taken and medicinally used; but, as it is *commonly abused* by most men, which take it as tinkers do ale, 'tis a plague, a mischief, a violent purge of goods, lands, health — hellish, devilish, and damned, the ruin and overthrow of body and soul." This is certainly "saying something on both sides" with a vengeance!

As far as the physiological effects of alcohol* are concerned, that its use as a vehicle for beneficent drugs is of incalculable value will hardly be denied, nor its value as a stimulant at times, nor will the sad effects of over-indulgence — temporary or habitual — be controverted; there is something on both sides here also.

The danger which I apprehend, and the fallacy noted on all sides to-day, is that the public, always ready to follow selfish and ill-considered advice, anxious to be led by quacks, and advised in harmony with their appetites and weaknesses, are now being persuaded that there are no deleterious effects from the use of wines, whiskies, beer, etc., provided these articles are "*pure*"; and that they may smoke *tobacco* with impunity, provided they do not smoke *cigarettes*.

Some vendors of whiskies and other alcoholic beverages have been most active in this country and in other countries in seeking legislation to punish adulteration, and, while joining the prohibitionists in pointing out the alleged horrors in adulterated goods, boast of the extreme purity and harmlessness of the article in which they especially deal. How common it is to see the advertisement in the street cars: "Don't drink; but if you do, then drink only pure whisky. Blank's whisky is absolutely pure." Temperance reformers and others interested in the welfare of their fellow-men have unconsciously assisted in the spreading of this idea, until from many platforms we hear more of the horrible adulterations of drink than we do about the physiological effects of the legitimate ingredients in all of them. Staid boards of health, public analysts, and others have also dwelt very largely upon this side of the question, until there is abundant evidence that the public is misled, and a strong proba-

* Common or ethyl alcohol is everywhere intended in this paper.

bility that many a man upon whom the alcoholic habit is fastening itself is encouraging himself with the belief that he will suffer no injurious effects if he only imbibes the product of some particular manufacturer.

Perhaps this is a convenient place to state my premise, and proceed to discuss it more in detail. As to alcohol: if the use of intoxicating drinks is, on the whole, an evil to be combatted, the medical profession, as well as all temperance reformers, should never cease to make it plain that the evil lies in the alcohol in the liquors, and not in the adulterations; that the unfortunate votary should not be allowed to deceive himself with the idea that if he drinks some particular brand, or abstains from another, he can derive benefit, or at least escape injury. If he is injured at all he is injured by the alcohol; if he is benefited at all he is benefited by the alcohol.

It is really remarkable, when one thinks of it, how very slight is the difference between all classes of alcoholic liquors as a matter of fact, however different they may be in taste, color, etc. We know that they consist essentially of water and alcohol, with only from 2 to 7 per cent. of all other ingredients, unless artificially sweetened. In wines, for instance, the difference in flavor is almost entirely due to the volatile acids and ethers, and in no wines are these present in greater amounts than $\frac{6}{100}$ of 1 per cent. The alcohol by weight in standard wines will vary from 7 to 18 per cent. the water 80 to 90 per cent., and the solid residue, which includes all the coloring matter and sugar, varies from 1 to 4 per cent., for all excepting artificially sweetened wines, like champagne.

The natural coloring ingredient of these substances in no case exceeds 1 per cent. of the material, the salts in solution in no case exceed $\frac{2}{100}$ of 1 per cent. when all the phosphoric acid, alkaline sulphates, chlorides, and carbonates are added in. In fact, the total mineral matter (ash) after burning off all the organic matter, varies, in Battershall's Table of Standard Wines, from 0.17 per cent. to 0.48 per

cent. We may therefore leave, as proven, the statement that there is nothing in natural wines that is injurious, unless it be the alcohol.

When we consider the question of whiskies, brandies, rum, and other distilled liquors we meet with another set of conditions, but to which the same facts may be applied. According to Blyth, the constituents of brandy show: alcohol from 48 to 60 per cent.; water from 37 per cent. to 48 per cent., total solid matter from 1 to $1\frac{1}{2}$ per cent., mineral matter or ash, from 0.04 to 0.20 per cent.; acids, from 0.01 to 0.05 per cent.; sugar, from 0.0 to 0.40 per cent. Twenty-five samples selected by the Metropolitan Board of Health for analysis showed alcohol by weight from 25.39 to 42.96 per cent.; solid matter from 0.02 to 1.79 per cent.; these samples being abnormal chiefly from the fact of their palpable dilution with water, reducing the alcohol from an average according to our above table, of 54 per cent., to an average of 34 per cent. The Board of Health of the State of New York in 1881 analyzed a great many samples of American whisky, finding the alcohol by weight to vary from 23 to 52 per cent., and the solid residue from 0.1 to 0.7 per cent.

Rum and gin are also, as is well known, simply mixtures of water and alcohol obtained by fermentation, distillation, different from one another and from whisky and brandy only in the average proportions of these two chief ingredients, and in the natural or artificial flavors imparted to them. Of course, as in the case of wines, popular demand, as well as the ingenuity of dealers, causes artificial flavoring of these substances with any and every ingredient likely to produce the desired result, and we find in the list of substances recommended, many which, considered by themselves, harrow the imagination; such as oil of turpentine, recommended to give a distinctive flavor to gin, in place of juniper berries, cayenne pepper, etc., etc., but the above outlined analyses show in what infinitesimal proportions these substances are added, and consequently, even when present, how slight must be their effect on the system *as compared with the alcohol.*

Numerous recipes are given for imitating genuine distilled spirits, but the worst of them show but exceedingly trifling amounts of injurious adulterations ; for instance, a well-known receipt for imitating brandy calls for 40 gallons of proof spirits, 1,000 parts of alcohol (95%), 600 parts of water, one part of essence of brandy, $1\frac{1}{2}$ parts of burnt sugar, $\frac{1}{4}$ oz. of tannin, and $\frac{1}{6}$ of an oz. of oil of cognac. The latter ingredient is chiefly amylic alcohol, but in this proportion of liquid its physiological effect is inappreciable compared to the alcohol.

Another formula for making 50 gallons of rye whisky, artificially, calls for 50 gallons of alcohol, 10 drops of oil of wintergreen, 4 ozs. of acetic ether, 4 drops of oil of cloves.

Receipts for making Scotch and Irish whiskies call for the following :

Scotch Whisky.

46 gallons 95% alcohol,
8 gallons of real Scotch whisky,
18 gallons of water,
3 pounds of honey,
5 drops of creosote,
2 oz. of acetic acid,
1 gallon of ale,
1 ounce of pelargonic ether.

Irish Whisky.

30 gallons of alcohol (proof),
5 gallons real Irish whisky,
 $\frac{1}{2}$ gallon old ale,
4 drops creosote dissolved in acetic acid,
1 ounce pelargonic ether.

The difference seems to be that there is *no water* added to the *Irish* article. The "pelargonic ether" is a flavor made up of a mixture of Jamaica rum, vanilla essence, raisin juice, and one or two other harmless ingredients, with caprylic, caproic, and other organic acids. This is probably the worst that can be said of the distilled liquors, excepting as to the fusel oil, which is another name for amyl alcohol, and even in fresh potato spirits it is never present in greater quantity than one part in 500.

It is, perhaps, a natural desire on the part of Boards of Health, temperance advocates, and other reformers to make out as strong a case as possible against intoxicants, but they overdo it when they dwell on the adulterations they are supposed to contain. Granting that wines have been found to contain tumeric, glucose, borax, gum-kino, and even arsenic, to say nothing of aniline red and other colors, and that these substances are poisonous to greater or less degree, it is, nevertheless, true that they are so *rarely* present in *any* wine or liquor, and then in such very small quantity, that injury from their presence must be exceedingly rare; arsenic, for instance, having been discovered once, in Spanish wines, and aniline dyes very seldom, if ever, in this country. There is such a thing as pushing entirely too far arguments based on the mere presence of poisons.

Whisky and other fermented liquors are, according to all authorities, seldom, if ever, adulterated in the United States. Blyth says: "In the United States, whisky is probably less subjected to serious sophistication than any other spirituous drink, and there is very little ground for the belief that it is subjected to noxious admixture to any great extent."

Some time ago the editor of a well-known weekly paper published in this city, himself an earnest advocate of temperance reform, desired to ascertain and publish what were the facts concerning alleged adulterations of, and injurious qualities in, the wines and liquors sold to the poorer classes in New York. My firm were retained to collect the samples and make analyses. The samples were purchased at various saloons and groceries on the east and west sides from Harlem to the Battery, and, I may say in passing, that some of the things observed by my agents in securing these samples were themselves eloquent sermons on behalf of the *control* of the liquor traffic. In one saloon on West street, for instance, my man had to wait for his flask of brandy until a previous customer was served. This customer was a little girl, her head barely reaching to the level of the bar. She laid down

her ten cents and handed up an empty whisky flask, which she had been sent from home to have filled. The bar-tender filled it, and set it down without corking it, winking to my representative, indicating that he should watch the child. The little thing tipped the flask up, took a drink, and replaced it on the bar. The bar-tender refilled it without a word, put in the cork, and the child went away with it. Upon my man expressing his horror at the sight, the bar-tender said: "What can I do? That is her commission. They all demand it, and if I do not give it to her she will go somewhere else."

But we are at present interested in the *results* of these analyses, not with the method of securing samples; and these results, not to weary you with details, I will sum up in the words of my report to the editor.

"The whiskies were in no respect adulterated, the coloring matters and flavoring being caramel and raisins respectively, both harmless.

"Twenty-five samples of brandy, varying in price from fifty cents to \$1.75 per quart, contained no fusel oil, no coloring matter except caramel, and no extract of pepper. All but one contained zinc and lead and had copper in minute proportions. These were undoubtedly due to metallic stills or pipes, and were no more prevalent than in soda-water led through lead pipes with syrups dispensed from metal cans in some soda-water fountains of this city and Brooklyn, to my personal knowledge.

"The alcohol in the brandies varied from 25 per cent. to 50 per cent. Two of them contained more alcohol than is natural—it had been added—while the balance of them had been diluted.

"The sherry wines contained no metallic poisons and no poisonous coloring matter. The alcohol varied from 9 to 23 per cent., most of them having been diluted with water. But one sample of the sherries had been fortified with alcohol, the balance being diluted.

"The port wines contained no metallic poisons and no

logwood or other poisonous coloring matter. Burnt sugar in most and cochineal in one were the only artificial colors.

“As a general thing, the cheapest liquors were the least injurious, as they contained, from their dilution, the least alcohol.”

I next take up the subject of beer, which, perhaps, owing to the extent of its use, is the most important. Chemists of Germany have found in beer all sorts of substances, harmful or otherwise, but the chief of these may be considered harmless, *viz.* : burnt sugar, liquorice, molasses, quassia, coriander seed, glycerine, and glucose. The harmful ingredients are only relatively so, salicylic acid being the chief of these

The reports of the United States government experts and those of the various State Boards of Health are all against the prevalence of poisonous adulteration of beer, admitting that it is the exception, and not the rule, to find deleterious substances present.

I trust that the Society does not conclude that I am asserting that there are never harmful substances in our alcoholic liquors. I simply take the ground that as compared with the alcohol their injurious effect is absolutely insignificant; and this is true of the salicylic acid infrequently found in beer. At great length, professional chemists and sanitary experts have experimented with this drug, and there is plenty of evidence that in continued or large doses it is injurious, yet the dose for an adult is from ten to forty grains, and in no beer or ale is it necessary, to produce the effect desired, to have it present in anything like that proportion. To-day there are few, if any, of the ales and beers on our market to which it is added, as is demonstrated by the analyses and tests constantly published.

As has been intimated, the difference in flavor between two kinds of wine, between sauterne and claret, port and sherry, for instance, is so delicate that it requires but an infinitesimal amount of the natural or artificial ether or organic acid to affect it. This can be readily seen when we consider the difference in taste between two varieties of grapes.

Instinctively the tongue recognizes the difference between a Catawba and a Niagara grape, for instance, but no chemical analysis, however subtle, could isolate, or, if isolated, determine the relative proportion or identity of the delicate ethers which cause this difference in aroma or taste.

I will conclude this part of my paper by stating some comparative figures showing the difference between wines, beers, and distilled liquors in composition, emphasizing once more how slight this is.

	Rhine wine.	Claret.	Whisky.	Brandy.	Beer.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Alcohol by weight,	9.00	12.00	38.00	50.00	3.00
Water,	88.00	85.00	60.00	48.00	91.00
All other ingredients,	3.00	3.00	2.00	2.00	6.00
	100.00	100.00	100.00	100.00	100.00

I have not touched upon the question of the benefit or injury of the alcohol. Abundant experiments will bear me out in the statement that the benefit in typhoid fever, pneumonia, etc., derived from liquors can be exactly duplicated by plain alcohol and water; and the intoxication from plain alcohol is just as pronounced as from the worst "Jersey lightning." The color, flavor, and "smoothness" of liquors depend on age—or sometimes manipulation; their effect depends on their alcohol.

We are now brought to the second division of this informal paper—that relating to tobacco—and my premise is: If the use of tobacco is ever an evil to be combated, the medical profession, as well as all reformers, should not cease to make it plain that the evil lies in the nicotine—that is, in the tobacco itself, not in its adulterations—and that this injury does not depend upon the form in which the tobacco is used. I employ the term nicotine in its broadest sense, including all the alkaloids associated in tobacco.

A few years ago I found myself in that interesting corner of the world where the States of North Carolina, Virginia, and Tennessee come together. My driver and guide was a youth of about nineteen. We stopped at a store, and he called out the proprietor. Upon his appearing, the youth

handed me ten cents, and requested the storekeeper to sell me a package of cigarettes. I handed the money over, and then asked my driver for an explanation of this financial transaction. He said: "Why, you know it is against the law of this State to sell cigarettes to minors—I am not of age. The storekeepers here are strict. In this county I have to buy smoking tobacco and make my own cigarettes, or smoke cigars. Over the State line I can buy cigarette papers, but not cigarette tobacco, and some of the dealers make me show my pipe." He added: "I don't smoke a pipe, but if I simply show it I can buy all the smoking tobacco I want and make my own cigarettes. It is handier, though, to get somebody who is of age to buy the cigarettes all ready made for me."

The legislation against the smoking of cigarettes has been to me one of the most interesting phenomena of these times, especially as I happen to know something of its inception. It is now some ten or twelve years since I was approached by a gentleman representing one of the largest combinations of tobacco interests. He desired to retain me for the purpose of making a series of investigations of cigarette papers and all that pertains to this article. The gentleman stated to me, without hesitation, that the cigar and chopped tobacco men began to find their trade seriously interfered with by the growing popularity of the American cigarette, and that they had determined to offset it in every possible way. They desired to show through the public press that, first, extremely dangerous products resulted from the burning of the cigarette-paper-creosote, etc., and, second, after they had worked this scare to its utmost market value, to show that opium and other deleterious drugs were used in the manufacture of cigarettes, and that the public using them ran great danger. I undertook the investigation as a matter of business, examined no end of cigarette-papers for lead, arsenic, and other deleterious substances, but with entirely negative results; in fact, the rice paper usually employed was the purest form of cellulose that had been

brought to my attention, and the products of its combustion all told were infinitesimal in amount and effect as compared with the combustion of the tobacco-leaf itself. There is more cellulose in one cigar than in 100 cigarette-papers.

I next addressed myself to an analysis of the cigarettes upon the market, and reported that these contained various substances with which to flavor them, and to prevent their drying up, among which were angelica root, tonka bean, rum, licorice, glycerine, glucose, and nitro-benzole, but no opium, and I reported that these substances were comparatively harmless when burned in full or in part, and only the harmless ingredients were present in any amount. I found, however, that other chemists were being employed for this purpose in different parts of the country, and very soon arose the chorus throughout the press first against cigarette-papers, then the cigarette itself, which has resulted in anti-cigarette legislation and anti-cigarette leagues throughout these United States.

I desire to state right here, and in the most positive manner, that there *is one* objection to cigarettes which is not at all fictitious, and that is the handy form in which they are presented; and the fact that dealers will sell them in broken packages render them extremely alluring to the tender youth, who undoubtedly smokes oftener, and more easily acquires the habit, than would be the case if he had to acquire it from the use of a cigar or a pipe; and again, their very adulteration with artificial flavors renders them mild, and tempts to inhalation of the smoke. But I trust that I shall be able to prove the fact that, after all, *if the youth is injured*, or, for that matter, the adult, by smoking cigarettes, *he is injured* by the nicotine in the tobacco, and not by the paper or flavoring, or other adventitious ingredients.

The adulteration of tobacco has received great attention for many years, though not to the extent as has the adulteration of wines and liquors. Long before there were such things as chemical analyses there were stringent laws against the adulteration of wines, and there are in Europe laws

against the adulteration of tobacco. It is related that in the reign of Henry VI. in the year 1432, a petition was presented to this monarch which stated that the Lombardes were corrupting their sweet wines, and, by command of the king, "the mayor of London, John Ranwell, seized casks in divers places of the citie; the butts were broken open in the streets to the number of fifty, so that the liquor running forth passed through the citie like a stream of raine water in the sight of all men, from whence there issued a most loathsome savour."

I will not deny that a "most loathsome savour" frequently emanates from some cigarettes, and I am not an advocate of the flavoring mania of the present day, nor am I prepared to commend the cigarette on the grounds of taste or morals, but really it is a popular fallacy to suppose that it is adulterated injuriously to any greater extent than tobacco in any other form.

The worst adulterated tobacco is that which is sold in the form of snuff, and the long list of substances going into the composition of this article in Europe makes one hunt carefully before he finds the word "tobacco." The leaves are dyed with various suitable browns, among which are mentioned as articles common for this purpose, printers' ink, Frankfort black, and logwood. The microscope has revealed in snuff ground wood, ground oats, turf, moss, weeds, chicory, umber, ochre, quicklime, and even powdered glass, to say nothing of cayenne pepper. But, after all, says the Encyclopedia Britannica, in summing up an article on snuff: "Its properties are dependent on the presence of *free nicotine* and the peculiar aromatic principle developed in fermentation."

One of Dickens' characters is an analytical chemist, which individual makes himself obnoxious at every feast by saying: "Oh, if you only knew what dreadful things you are eating you would abstain," or words to that effect. I do not propose to come before this society in this role and get myself disliked, nor to harrow your feelings with detailed

descriptions of the substances which are said to enter into some of the *cigars* of commerce. But before this audience I may speak freely of chewing tobacco without hurting anybody's feelings, which sometimes cannot contain a large per cent. of tobacco in its composition, after we have deducted molasses, sugar, aloes, licorice, gum catechu, lamp-black, alum, bi-chromate of potash, tannic acid, iron, logwood, rhubarb, cabbage, burdock, and other leaves, all of which have been found in chewing tobaccos. Still, many of *these* substances are entirely harmless, and, in fact, the English laws, which are very stringent against adulteration, specifically allow some of them, like licorice, to be added to chewing tobacco.

The purest tobacco is undoubtedly that which is prepared for pipe smoking, purer, in my opinion, than that found in the average cigar, yet the nearer it comes to the absolutely pure leaf the higher the per cent. of nicotine; but neither in the cigar, nor cigarette, nor chopped or cut tobacco, is there at this day, among all the adulterations, anything approaching in potency this nicotine which they contain.

Whether we are smokers or non-smokers, whether we are moderate or immoderate drinkers, or total abstainers, let us fearlessly and honestly and intelligently instruct the rising generation that alcohol and tobacco are substances to be avoided by youth, no matter in what form or under what name they may be sold; and let the intelligent physician, who meets in his practice the too slavish devotee of the tobacco habit or the votary of alcohol, inform his patient in all candor and fearlessness that it is the alcohol and the nicotine which he must let alone, and not endeavor to shift him from port to sherry or from cigar to pipe, under the vain delusion that if one harms the other will benefit.

A few years ago, before the days of the cigarette, warfare raged around the cigar, which began to supplant the pipe. That was the day when our grandfathers were all told to drink port *ad libitum*. In our youth, here in New York, we

were told *nullum vinum nisi hungaricum*, and to-day we are warned against wines by our medical friends, and told to drink only Scotch whisky. Let us be honest.

Mr. President, the card I received reminding me of this meeting to-night states: "A collation will be served after the meeting." I had not noticed this on the cards announcing other recent meetings, and I wanted to see if it had any connection with my subject, so I looked it up in the Century dictionary. I found many meanings for the word "collation," and give them in their order:

1. "A comparison of manuscripts."
2. "A collection of the lives of the fathers of the Church."
3. "The act of reading or conversing on the lives of the saints."
4. "A conference."
5. "A contribution from several participators."
6. "A sort of theological lecture, laying down propositions *without necessarily proving them*." (This sounds like the General Assembly!)
7. "A reasoning: drawing conclusions."
8. "A repast; a meal originally partaken of by monks after reading the lives of the saints."

I read no farther, for the illustration of this meaning was a quotation from Whiston, the English theologian of 1700. He had been invited to a conference, and says: "I found such a collation of *wine* and sweetmeats as little corresponded to the terms of the invitation." (He was subsequently declared a heretic.)

A collation, then, may include wine, and perhaps cigars; so I will prudently close my paper before I say too much.

DR. FRANKLIN of Indianapolis reports a case of a child born asphyxiated in a difficult labor, who was given hyperdermatically one-fourth of a grain of morphia every two hours until one grain of morphia was taken. The child recovered, but died two weeks later. The morphia was given by mistake, supposing it to be nitro-glycerine.

OPIUM IN GYNECOLOGY.

BY JOSEPH PRICE, M.D., PHILADELPHIA, PA.

The medical profession has always been responsible for the opium habit of patients or the laity. The reckless and indiscriminate use of anodynes and narcotics, generally used for the treatment of symptoms—rarely does the routine practitioner make a precise diagnosis, before giving opium if pain is present. Opiates are commonly used without a clear recognition of an indication except that of pain. The opium habit is rarely acquired, except it be antedated by pain or an illness for which some doctor has given morphine or some preparation of opium. There is scarcely a remedy in the Pharmacopœia used so recklessly and ignorantly and none doing more general mischief—it has always done thrice more harm than good. In the general practice of medicine some of the preparations of opium are to be found in about every prescription. The hypodermic syringe has made thousands of morphine habitués, either with the syringe or without it with the powder. The abuse of the drug is much more common in some States than in others. The influence or impress of certain teachers of therapeutics has been wide in certain sections. The very common remark of teachers, "Gentlemen, it is your mission to relieve pain and suffering," has done a world of mischief. Many of them spend days talking over the numerous preparations of opium without an allusion to the importance of an accurate knowledge of pathology and diagnosis. The growth of the poppy in North Carolina is to be lamented; it will do just what it has done for China—decimated a great people.

While a student of medicine we were taught the use of opium throughout the treatment of about every disease. In many of the hospitals Dover's powders were dubbed "dozing powders," and begged for nightly. Many patients purchased

hypodermics immediately on their discharge from the hospital. The abuse of morphine with the hypodermic has resulted in two great evils, an habituate, and the mercenary use of the drug; the unfortunate patient the prey. Now, daily at eight o'clock, I see a physician drive to a house to give a hypodermic; the visit is made twice or thrice daily at fixed hours, to repeat the injections, not for malignancy. It is a common thing for physicians to visit patients regularly for the specific purpose of giving a hypodermic. Again without an effort to determine the nature of the trouble, or cure the patient with well-applied treatment. It is in surgery and nervous disturbances that opium and patients have been most abused. But few physicians re-educate themselves; the few that have successfully tried it, realize the great importance of deviating from the routine methods of practice still commonly taught. It is to be hoped that the more scientific schools of the day will recognize the great evil.

The comfort of patients throughout their convalescence in abdominal surgery has been so gratifying and pleasing without the use of opiates in any form that I constantly take pleasure in exhibiting patients to visitors and pupils, and directing their attention to the total absence of all the uncomfortable symptoms following its use.

The management of all surgical cases is easy and the convalescence more satisfactory and speedy when opium preparations are not used. I am satisfied that the use of opium in some form, either by injection, suppository, or solution, has been largely responsible for much of the high mortality in abdominal surgery. I rejoice I have never used it in abdominal work except where cancer existed. I have watched the work of others and compared the mortality of the operators who use it with that of those who reject it—all that condemn it head the list with a low mortality. It is simply cruel and unkind to use opium in abdominal surgery. The use and abuse of it before painful troubles are removed obscures symptoms, impairs nutrition, and greatly compli-

cates the management of the patient. Without opiates the patient co-operates, the pain lasts only a few hours in all abdominal and pelvic operations.

The numerous uncomfortable conditions favored by opium are wholly absent without it.

The surgical profession should make an earnest effort to withhold opiates before discussing this subject.

We can justly speak of the opium or morphine habit as that of the profession, not of the patient.

The following report of four instructive cases will illustrate most beautifully the successful management of four typical cases of acute, angry, and general peritonitis, a painful trouble, one always treated by opiates and rarely successful; quite universally admitted a fatal disease.

Case I. October 13, 1894. Mrs. A. F., aged twenty-five years — acute general peritonitis, persistent nausea, distention, general adhesions, bloody serum, lymph and muddy fluid throughout the peritoneal cavity. Freeing of all adhesions, irrigation and glass drainage, followed by speedy recovery.

Case II. October 13, 1894. Mrs. M. B., aged twenty-three — acute double pyosalpinx, with acute general peritonitis. Section irrigation, glass drainage; speedy recovery.

Case III. October 17, 1894. Mrs. J. C., aged twenty-one years — acute double pyosalpinx, with general peritonitis. Section removal of suppurating tubes and ovaries, irrigation and drainage, freeing of all adhesions; recovery.

Case IV. October 25, 1894. Miss J. R., aged twenty years — acute pyosalpinx, general adhesion and peritonitis. Removal of suppurating tubes and ovaries, unraveling of all adhesions, thorough flushing, glass drainage; recovery.

This was a very angry and ill group of patients. The treatment was rather simple, rapid and thorough. Section, irrigation, drainage, and rest, quiet and position, without opium. All varieties of peritonitis have been uniformly and successfully managed by the simple treatment suggested.

DUTY OF THE PROFESSION IN INEBRIETY.*

BY HAROLD N. MOYER, M.D., CHICAGO,

Professor Mental Diseases, Rush Medical College, Fellow of the Chicago Academy of Medicine.

Is inebriety a vice or a disease? To the philosophical mind it would seem as if the above question was useless, as our answer will depend almost wholly on the definition that we attach to the terms "vice" and "disease." The term disease as used by medical writers has come to have a narrow and restricted meaning. That was not true of the old French word *désaise* from which the word is derived, and which simply meant a want of ease, or discomfort, and might be applied to an immense variety of conditions and objects. This broader use of the word was common with the early English writers. Spenser says :

"Labored long in that deep ford with long disease."

Of late the term has become more and more restricted until it is now largely used by medical writers to designate certain morbid conditions of the body or its organs, usually accompanied by a disturbance of function or appreciable alterations in the tissues. Later writers, particularly those indoctrinated with the evolutionary views of Darwin, Spencer, and Huxley, would again enlarge the scope of this term, and now define disease as "a want of harmony between the individual and its environment." In this broad sense all vice and criminality are but diseases, which is substantially the view adopted by Lombroso, Maudsley, and others interested in criminal anthropology.

In this, as in many other discussions, an exact appreciation of the scope, and agreement as to the meaning, of the terms employed would at once settle the main points of contention.

*Chicago Pathological Society Transactions.

It is apparent that in the narrow, restricted sense inebriety should not be considered a disease, certainly not in the same sense that pneumonia is. Of course, the secondary effects of alcohol, the changes of brain, stomach, and liver that are produced by it, are diseases. The question, however, does not relate to these, but to the drink-habit *per se*. At first it would seem that inebriety must surely be a vice, that to drink alcohol or to refrain from doing so is something peculiarly within the domain of the volition of the individual, and if we adopt the theological conception of free-will we must place inebriety among the vices ; but it is at this point that evolution steps forward and denies the freedom of the will in its broad sense. We are, therefore, on the horns of a dilemma. We must accept one theory or the other. Which shall it be? Before answering this question let us consider the question of utility, for theories must, to a large extent, govern practice, not only in medicine, but in human affairs. The world once burned its witches, because on the then theory of witchcraft they believed it would be dangerous to allow witches to live and be at large. The revolving stool, baths of surprise, and chains were part of the necessary outfit for the treatment of insanity. It was not that the people of those times wished to be cruel, but the treatment was an outgrowth of a mistaken theory of insanity. This theory was based on the metaphysical conception of free-will. The doctors interrogated their own minds and found that they had the power to control their wayward fancies and co-ordinate their conduct. They believed that lunatics had the same power if they were only furnished a sufficiently powerful motive, hence the stripes and chains with which lunatics were treated, and according to their theory of the diseases the treatment was certainly appropriate. They could not conceive of the mind being diseased, hence insanity marked but an imperfection in the will. The same question is now raised concerning inebriety, and we must ask ourselves whether the chronic drinker *will not* or *can not* abstain from liquor. If the liquor habit marks but an imperfection of the

will its natural treatment will be prayers, exorcisms, and moral suasion, as well as fines and imprisonment. The world has been following this prescription for many years, and with, so far, but imperfect results. The agitation against liquor has greatly lessened its use as a beverage, and has quite banished it from the tables of the better classes of the community, but at the same time we doubt if there has been a material decrease in inebriety, certainly not if we count the various drug habits that in a measure have taken the place of alcohol. The chief argument that is used in support of the vicious theory of drunkenness is, that to admit for a moment that the inebriate is a diseased person removes at once all incentive to moral regeneration, that he will sink supinely into the condition of an interesting invalid and will give up all hope of reformation. We do not think that this view is well taken or that it is borne out by the experience of those skilled in the treatment of inebriety. If we tell a gouty person that his disease is the result of an indiscretion in diet, and that he must be more abstemious in the future, do we thereby lessen his inhibitory power? Would it be better to say that there is nothing the matter with him, and that the pain in his toe marks but an imperfection in morals?

If we assume that inebriety is a disease, we place an additional restraint upon the use of alcoholic liquors. If the consequences of over-indulgence are once clearly pointed out, and that the chronic ingestion of alcohol not only produces a disease, but in a measure renders an individual irresponsible, not only will there be an additional incentive to refrain from its use, but the community will deal much more justly and rigorously with the inebriate. The chief enemy of these unfortunates is their immense egotism. It is rare to meet one who does not say that he can give up the habit any time. Or, after a brief period of abstinence, he will say that he could wade through a lake of liquor as deep as his chin and not drink a drop. Such remarks as these are usually precedent to a most disastrous relapse. The only way to overcome this egotism and the too great confidence of friends is

to teach that inebriety is to a great extent beyond control of the person's will, that the mind and body are diseased and that it is necessary for the person to place himself under medical advice for the bodily ailments and the best circumstances for aiding the feeble will.

Another matter that has served to obscure the discussion and proper understanding of this subject is that there is no well marked line of division between liquor taking and inebriety. One swallow does not make a summer, and one drink does not make an inebriate. In fact, some individuals do and may take liquor in moderate quantities for many years, without becoming inebriates. It is impossible to lay down any hard line on one side of which a man shall be said to be an inebriate and on the other that he has the drink habit. It would be desirable for our theories if nature would follow our classifications and make clean-cut distinctions. We can divide the whole world into inebriates and sober people, but we shall find all gradations, from the individual who takes three or four drinks a year, to the victim of the drink disease who is as hopeless and helpless in the presence of his malady as is the sufferer from epilepsy or hydrophobia. This want of division is not peculiar to inebriety, it is characteristic of insanity, and one of the chief difficulties in dealing with the legal control of the lunatic arises from this want of a dividing line between sanity and insanity, a difficulty that our judges have been attempting to overcome for two hundred years. It is impossible to lay down any definite rule, but in a general way, where there is a distinct craving for alcohol, which is only partially restrained, or where we have unrestrained indulgence with the more constant phenomena of acute or chronic intoxication, or where we have the secondary effects of alcohol upon the tissues, we may make a diagnosis of inebriety. It is well understood that such division is but arbitrary, and the effects of alcohol in the milder cases is one of degree and not of kind. Still a division must be made somewhere, and it would seem best

to place it near the point where alcohol affects self-control and civic relations.

The profession at large owe a great debt to the inebriate and one that they have appreciated too lightly in the past. It is rare that a patient presents himself directly for the alcohol habit ; it is usually for some intercurrent affection or for the secondary results of the alcohol. As a rule the symptoms are prescribed for, a few inquiries are made regarding habits and the patient is told to moderate, or stop his use of alcohol, and dismissed with a few added injunctions as to diet. In these cases the physician regards as a cause that which is in reality the disease (inebriety). It is the duty of the physician in every such case to make a careful inquiry into the family and previous history of the patient, the date of beginning of the alcohol habit, its cause if ascertainable, and finally the quantity, time, and kind of alcoholic drinks taken. These, with an estimate of the condition of the nervous system and an examination of the internal organs, will furnish a guide for prognosis and the general indications for treatment.

I do not believe there is any specific treatment for inebriety, nor that there is any drug or combination of drugs that will relieve the craving for liquor, except they are themselves intoxicants, or are like strychnine, atropine, or other alkaloids, that when exhibited in very large doses produce a marked toxic effect. Not that these drugs are devoid of value when exhibited in proper doses, and under proper directions. They are most excellent tonics and restoratives, but when given in extraordinary quantities and particularly beneath the skin, they may produce very profound disturbances in the nutrition of the nerve centers that may lead to insanity or the production of the more grave degenerations.

Such drugs as ext. cocoa and the general nerve tonics are indicated, but they are not to be given in doses that shall in any way make them substitutes for the alcohol that has been taken. Hot baths are useful, especially the Turkish bath, where available. They tranquilize the nervous system

and aid elimination. Chloral, the bromides, and other sedatives are useful to procure sleep. These patients ought to be kept busy as much as possible with their treatment. Medicines should be given often, in small doses, and the baths frequently repeated. It is astonishing sometimes what a wonderful effect a small bottle of a comparatively innocent drug will have in allaying the thirst for liquor, providing the patient is told with sufficient earnestness that it is given for that purpose. In a general way, the home treatment of inebriety, like that of insanity, is unsatisfactory. In the milder cases good results may be achieved. In the more advanced cases, where the peculiar mental changes of chronic alcoholism have come on, it is better to send the patient to some institution. In this way old habits and associations are interrupted, and a more profound impression is made upon the mind of the patient than can ever be reached by the physician at home, be he ever so skillful.

In bringing this article to a close, I am profoundly impressed with its fragmentary nature. I have made no attempt to go into the extensive and valuable literature with which, indeed, I am but imperfectly acquainted. I have simply endeavored to set down a few suggestions that have been the outgrowth of my experience with this class of cases. If it shall but stimulate the profession to a livelier sense of their responsibility in dealing with these unfortunates it will fulfill the object for which it was written.—132 *LaSalle St.*,
Chicago.

DEPARTMENTAL INQUIRY ON INEBRIATES.—The Scottish Departmental Committee on vagrants and inebriates, concluded the reception of evidence at several sittings in London last week. Among the medical witnesses examined were Sir James Crichton Browne, Dr. Hoffman, Dr. Nicolson of Broadmoor, and Dr. Norman Kerr. Sir Charles Cameron, Bart, M.P., presided as chairman of the committee; Dr. Farquharson, M.P., and the secretary (Dr. J. F. Sutherland) were also present. The committee expects to meet in London in March or April to prepare their report.—*British Medical Journal*, February 9th.

TEA AND ITS EFFECTS.

BY JAMES WOOD, M.D.,

Visiting Physician to the Brooklyn Central Dispensary.

Excessive tea drinking is fast becoming a greater evil in this country than it ever has been in England and Ireland, the countries most noted for this indulgence. People so easily fall into the habit of using this form of stimulant that they are surprised when the physician calls their attention to the fact that they are drinking too freely. It is generally thought to be so harmless that it has become almost a household drink in many families, and in consequence the use is steadily increasing. It is, indeed, a very frequent occurrence to find one member of the profession advising patients to use tea and another immediately prohibiting its use. This procedure testifies most strongly to a want of some definite knowledge of the subject, and consequently there is no principle for guiding the course to be taken. What result this condition of affairs has had upon the limitation of the use of tea is well illustrated in the increasing demand and consumption in this country.

In 1890 there were imported into the United States 83,494,956 pounds of tea, an appreciable increase over the previous decade, and giving an allowance of $1\frac{1}{3}$ pounds to each individual — truly a surprising quantity.

Some there are who deny that "theinism" is a common condition. In reply, the statement is made that since January 1, 1894, of 1,000 patients applying for treatment, 100 gave such symptoms in the general examination as to point directly to tea inebriation. How many suffered from a similar condition, but applying for treatment for such diseases that did not necessitate going into a history of their daily customs, were addicted to the same habit, it is hard to state. The estimate is made that at least 50 per cent. drank the in-

fusion to a greater or less extent. Here, then, we have clinical data of a cause of 10 per cent. of the ordinary derangements which one meets in general practice, especially in our large cities. Surely the importance of the question merits a careful study of tea and its effects upon the system.

There seems to be a very wide divergence in the results of different authorities in the analytic examination of the tea leaf or of an infusion of the same. Probably the best representative analysis is as follows :

Theine,	2.8	per cent.*
Albuminoid principles,	3.5	per cent.†
Carbohydrate elements,	9.0	per cent.‡
Tannic acid,	14.2	per cent.§
Essential oil,	0.75	per cent.
Cellulose,	23.0	per cent.
Water,	0	per cent.

These are considered the principal constituents of the tea-leaf, but besides the ones already mentioned, we have others, such as wax, resin, extractives of different kinds, salts, xanthine, hypoxanthine, boheic acid, and apo-theine. From this extensive list of constituents we might with justice consider the tea-leaf a very complex body. However, there are but few of value either from a dietetic or scientific standpoint. Those which we shall consider are theine, tannic acid, and the essential oil.

Tea is usually used in the form of an infusion,—very often it is a pure decoction, made from the leaves, and the action which it has on the human organism is as the sum of the effects of the three important constituents named above. The theine affects directly the nervous system primarily and the organic system secondarily : the tannic acid affects the digestive apparatus and such organs as are intimately connected with it ; while the essential oil gives us the peculiar

* Kozai says 3.3 per cent. : Muller, .65 per cent. : Peligot, 3 per cent. : Stenhouse, 2 per cent. : Bauer, 1.3 per cent. : Parkes, 1.8 per cent.

† Kozai says 5.9 per cent. : Muller, 3 per cent. : Bauer, 9.4 per cent. : Parkes, 2.6 per cent.

‡ Parkes, 10 per cent.

§ White, 7.17 per cent. : Parkes, 15 per cent. : Kozai, 10 per cent.

intoxication so typical of tea dipsomania. The natural order of study of this commodity and the effects of its use would be to consider at this point the infusion of tea. Tea is usually taken in this form by the people at large. The length of time of the infusion will greatly change, not only its composition, but influence almost entirely its action upon the system imbibing the same. A good example of this is found in the following table of the difference in the amount of tannin taken up in a three and fifteen-minute infusion :

	Finest Assam.	Finest China.	Common Congou
Infusion for 3 minutes yielded	11.30 per cent.	6.77 per cent.	9.37 per cent.
“ “ 15 “ “	17.73 per cent.	7.97 per cent.	11.15 per cent.

It will be seen from this table that in an infusion of fifteen minutes of the finest Assam (Indian) tea, the yield of tannin is nearly two and a half times as much as the finest China. In all of the different teas, we find the length of time of the infusion affecting greatly the composition, with possibly an exception in the case of the better qualities of China tea. About six-sevenths of the entire soluble matter — 33 per cent.* — of the tea-leaf can be incorporated in the first infusion. Again the authorities differ † greatly, but the above percentage will be found to be that most often met with in teas in common use in this country. Of the total amount of nitrogenous substances, 47 per cent.‡ is soluble and is present in the infusion. The amount of tannin will range from 7 to 11 per cent., differing in the kind of tea. The amount of essential oil is about .75 per cent., and is present in larger quantities in the first infusion than in subsequent ones, and if the tea is not drunk immediately, it is soon lost. This is well illustrated in the frequent headaches complained of by professional tea-tasters, who use

* Pavy, Bauer, and Peligot.

† Soc. of Pub. Analysts of Eng. says 30 per cent. : Muller, 45 per cent. : J. Lehman, 15 per cent.

‡ Parkes.

the infusion immediately after it is made. Thus much for the constituents of the infusion.

The amount of tea which can be drunk every twenty-four hours with impunity differs with the individual. Some people are profoundly intoxicated by indulging in two cups of strong tea per day, while cases have come under my observation where fifteen pints of the strongest were taken every day with very little damaging effects. Usually we find that an ounce of tea-leaves used daily will soon produce poisonous symptoms. This amount would contain from six to ten grains of theine.

The question might very properly be asked: What are the functions of the body disturbed by drinking tea, and what prominent symptoms are most often present.

From the first 100 cases which presented themselves for treatment and advice the following analysis has been prepared:

ANALYSIS OF SYMPTOMS IN 100 CASES OF THEINISM.

Sex, 69 per cent. female; 31 per cent. male. Quantity: 2 pints or less, 54 per cent.; 4 pints or less, 37 per cent.; 10 pints or less, 9 per cent. Strength: 77 per cent., strong; 15 per cent., ordinary; 8 per cent., not known. Number nervous: 72 per cent. Bowels: 40 per cent., constipation; 2 per cent., diarrhoea; 15 per cent., irregular. Pains: 16 per cent., general; 10 per cent., heart; 9 per cent., back; 6 per cent., side; 7 per cent., chest. Dizziness: 20 per cent.; faintness: 8 per cent.; gastric and intestinal indigestion: 19 per cent.; intestinal catarrh: 8 per cent.; dreams: 5 per cent.; "nightmare": 5 per cent.; depression: 10 per cent.; despondent: 20 per cent.; excited: 5 per cent.; suicide: 3 per cent.; headache: 45 per cent.; rheumatism: 5 per cent.; irregular menses: 12 per cent.; palpitation: 19 per cent.; muscular tremor: 12 per cent.; insomnia: 15 per cent.; anæmia: 6 per cent.; dyspnœa: 5 per cent.

In subsequent cases careful study is being made of the irregular cardiac action, hallucinations, nightmares, success-

ive dreams, obstinate neuralgia, anxiety, a persistent, sinking sensation in the epigastrium, prostration and general weakness, excitement, and mental depression. These are more or less present in nearly all cases of tea intoxication, and are often the symptoms for the relief of which the patient seeks medical advice. Certainly comment on the table is hardly necessary ; it bears silent but impressive witness.

In the abuse of this drink we have the ætiological factor, either direct or indirect, for nearly 50 per cent. of the headaches, one-fifth of the cases of dizziness, and the same percentage of despondency and palpitation of the heart. Truly an agent capable of so strongly affecting the human organism is worthy of more than passing attention.

The effects of tea drinking on the digestive organs is very pronounced. In a large number of cases it is the active agent in the production of constipation, in others an alternating constipation and diarrhoea, and in some an intestinal catarrh. Some patients after drinking tea give a history of severe abdominal pains accompanied with nausea, and the action of the bowels greatly diminished.

These or any of the effects which tea has on the digestive system are largely due to the astringent action of the tannin.

Schwann has shown that tannin will throw down a precipitate from artificial digestive fluids and render them inert. What else can we expect but deranged digestive action, when people will indulge in copious draughts of strong tea before, during, and after each meal, and often nearly every hour in the day ?

Let us now consider the principal constituents of the infusion of tea separately that we may better appreciate the latent power which they contain. The theine is probably the most important of them all, and yet what changes this nitrogenous body undergoes in the system is still uncertain. We know that the end products, like those found after the metamorphosis of any nitrogenous body, are undoubtedly urea, uric acid, creatinine, water, and carbonic acid, but what intermediate changes have occurred before the final

results are reached, is unknown. If it is oxidized artificially, we have as the result methylamine ($\text{CH}_3\text{H}_2\text{N}$), hydrocyanic acid (HCN), and amalic acid ($\text{C}_{12}\text{H}_{12}\text{N}_4\text{O}_7$).

Theine lessens the tissue metamorphosis to a considerable extent,* as we find a decrease in the amount of carbon dioxide expired. If theine is pushed until we get its full physiological effects, we have a general excitement of the circulation, with rapid pulse, muscular tremor, and a very urgent wish to empty the bladder. The imaginative faculties are more acute, or the mind may wander, hallucinations and visions make their appearance, and a peculiar form of intoxication supervenes. These symptoms end, after a long period of wakefulness, in a deep sleep from exhaustion. Theine seems to affect chiefly the sensory system, but, in large doses, it may cause spasms and convulsions. The peculiar rhythmical contraction, which we find in the voluntary muscular fibers and lasting for a considerable period, often several hours, acts transversely across the fiber, because we find that it is elongated at each contraction. Hypodermatic injections of theine acting on the sensory system produce local anæsthesia at the point where the needle was inserted, and for some distance below, thus having an efferent action along the nerve trunk. It is not narcotic.

Of the 47 per cent. of nitrogenous substances, little of value can be said. Traces of xanthine and hypoxanthine were found by Baginsky, and these bear the same relation to similar if not identical bodies which we find in the extract made from muscular tissue, and they undoubtedly occur as the result of a like process, namely, a retrograde metamorphosis of nitrogenous elements.

The amount of nitrogenous elements which is available for nutrition is manifestly too small to be of any value, and additionally it exerts little if any influence in the chemico-physiologic changes by virtue of which vital force is now produced. The arguments which certain individuals bring forth

* Dr. Edward Smith, Phil. Trans.
Vol. XVII.—19

to substantiate its high-sounding claim as a valuable addition to our list of food stuffs are truly amphigoric.

The next most important constituent of tea is the essential oil. This oil gives the aroma to the tea in a properly prepared infusion. Johnson is skeptical about its existence before the roasting and drying process has been completed, and thinks it is produced during this procedure. It is found more plentifully in the green tea, and seems to be lost during the greater oxidizing process through which the leaves are put in order to produce the black variety. Physiologically it exerts a stimulating and intoxicating effect which is so powerful that the natives do not use tea until it is at least a year old. This alone is the narcotic agent found in the tea leaf and infusion. The amount usually found will average about 1 per cent.

Mention has been made of a difference existing between the black and green varieties of tea. The green tea is richer than the black in theine essential oil and tannin, and all the constituents soluble in water by fully five per cent. The influence which the green tea has on the nervous system, and for which it is largely noted, is due to one of the above named constituents — the essential oil. Among the better class of people who drink tea, and can afford the better varieties, the black is given the preference, because it is less astringent and exerts less influence on the nerves. The poorer classes, in Ireland especially, use the Indian (Assam) and cheaper varieties and cannot avoid the deleterious effects which the better class escape.

Next to the effects of tea on the nervous system the digestive organs are most often deranged functionally. In so many cases the so-called infusion of tea is nothing more or less than a very strong decoction that its contact with secreting and excreting surfaces must result in harm. If tea is imbibed too soon after a meal is taken, the digestive action will be seriously disturbed and hindered. The condition is not to be wondered at when we are aware of the ease with which the active agents of the digestive juices are precipitated

and rendered inert by the tannin, or tannic acid, always present in the infusion or decoction. A very persisting gastric disturbance is often excited and maintained, which is positively non-responsive to any medicinal remedy and is only relieved by a total abstinence from the use of tea. In a large percentage of tea inebriates, as can be seen from the analysis given, the action of the bowels is greatly diminished, nausea is common, and very distressing abdominal pains are present. The nerve ganglia of the solar plexus are in an irritable condition, and a sinking feeling in the epigastrium is much complained of.

This description of the effects of tea on the nervous system and digestive apparatus is necessarily brief. To elaborate the different effects noted in those who indulge too freely, would be to narrate most of the common complaints suffered by humanity. In reports just received from institutions for the insane in Ireland great prominence is given to the immoderate use of tea as a causative factor in insanity.

The use of tea by the two sexes is a very interesting study. In the table of the 100 cases reported, 69 females were inebriates, while only 31 were of the male sex. This difference is often greater, especially among the poorer classes in our cities. Why this difference between the sexes exists is probably explained by the greater use of tobacco by men and the consequent satisfaction for a stimulant. Women assuage the importunities of the system for a stimulant by tea.

Undoubtedly the primal cause of the use of stimulants is poor health. Excessive labor, insufficient and unhygienic sleep, improper and inadequate amount of nutrition extending over a long period, possibly years, creates the best possible condition which calls for stimulants.

It is hardly within the province of this article to discuss the relation of tea-drinking to poverty, general perverseness, and other economic factors; these are reserved for future narration.

The relative position of theine among other stimu-

lants is interesting, as we may thereby the more readily appreciate the power which this drug—for we may with justice so class it—is capable of exerting.

Theine and digitalis exert certain physiological actions in common. In toxic doses reflex action is lowered, especially of the nasal mucous membrane, by exciting Setschenow's inhibitory center. Both cause prostration, muscular tremor, and often convulsions. They are mildly diuretic and diminish urea and uric acid. They cause nausea, vertigo, and abdominal pains. They are antagonized by opium.

The contrast between theine and caffeine is of still greater interest, because a large amount of so-called caffeine is made from old tea leaves, and is nothing more than theine. Is it, then, to be wondered at that some of the caffeine found in our shops proves of so little value?

Attention is called to the following table of the comparative actions of the two drugs:

THEINE.	CAFFEINE.
Effects sensory system.	Motor.
Produces neuralgia.	Does not.
Causes spasms.	Does so late, if at all.
Causes convulsions.	Does so late, if at all.
Impairs or abolishes nasal reflex.	Does so late, if at all.
Diminishes temperature.	Increases.
Is astringent.	Is relaxing.
Dilates capillaries of splanchnic arcade.	Contracts the same.
Mildly diuretic.	Is powerfully so.
Causes irregular and feeble cardiac action.	Causes strong and regular.
Causes sinking sensation in epigastrium.	Relieves the same.
Causes sick headache.	Relieves the same.
Opposes active nutrition.	Increases nutrition and tone of system.

While theine and caffeine are diametrically opposite in the above actions on the system, they are similar in producing cerebral excitement, wakefulness, hallucinations, and a soporific state following the exhaustion of insomnia. It is very apparent from our study of tea and its principal constituents, that we have an agent of great power,—one

capable of producing the most detrimental effects on the system.

A fact has been noted among those tea inebriates who also drink coffee which is in support of the above statement. There are a considerable number of people who indulge very freely in both coffee and tea, and it is often difficult to determine which is producing the poisonous effects.

When we endeavor to make a diagnosis by exclusions aided by the table already given, the difficulty is even greater. Caffeine and theine do undoubtedly antagonize each other, or rather, the symptoms which each are likely to produce alone are not present when the two are used in conjunction with each other. This was first noticed in some few patients who could drink large quantities of both tea and coffee and be but slightly affected thereby. They, however, complained the most of insomnia and cerebral excitement and of almost no other symptom. The study of the action of these two drugs in the system at the same time, was one of the most interesting phases of our investigation of tea intoxication and gave the idea for the employment of caffeine in the treatment of this condition — a procedure which has given the best results.

It is a question whether theine represents any physiological action worthy of a place as a therapeutic agent. It has been used hypodermatically in a few cases of sciatica, but with uncertain results. That its constant administration either in the uncombined form or in conjunction with other bodies, as for instance in the infusion or decoction of tea, is followed by undesirable effects on the system is undeniable. The pernicious influence on the organism which our study of tea has brought to light, and with its increasing use, should not be lightly treated, but an effort made to educate the people as to the danger of using it. Tea is one of the principal articles given to the poor by the charitable societies of some churches, and is a factor, therefore, of some importance in producing the increase of sickness among these unfortunates.— *Brooklyn, N. Y., 162 St. John's Place.*

UNWHOLESOME WORKSHOPS AND DRINK.

BY DAVID WALSH, M.B.,

Assistant Physician, Western Skin Hospital, London.

Your president, Dr. Norman Kerr, has asked me to contribute a short paper for discussion at your Society. In complying with that request I shall not attempt to deal with any of the deeper scientific issues involved in the study of inebriety, but shall endeavor to present you with some suggestions upon what appears to me a matter of some importance, namely, the relation of unwholesome workshops to intemperance.

The study of inebriety is now rapidly assuming the position of an exact science. Investigators recognize that alcoholism does not merely mark a failure in individual morality, but that it is to a large extent the outcome of heredity and environment. So that instead of bemoaning the personal wickedness of the drunkard the tendency nowadays is to unearth, as far as we may, the causes underlying his unhappy condition. To put the matter in other words, we no longer waste our time in treating symptoms, but do our best to get at the root of the disease. This attitude is the more hopeful inasmuch as we have in alcoholism to deal with a morbid condition which is in all cases much easier to prevent than to cure.

I venture to think that this logical way of approaching the question constitutes a great step towards the solution of a complex and difficult problem. It has always seemed to me that the temperance party has lost a great deal of support owing to the unattractiveness of its methods. Beyond a doubt the advocates of total abstinence have won great triumphs in the teeth of persistent opposition and abuse. Still, from a scientific point of view, their work is open to the objection that it has been carried out on a narrow basis, and

has appealed to emotions rather than to reason. Folks of sound understanding require something more than the hymns and the "horrible examples" of the teetotal platform to convince them of the dangers of alcoholic excess. They are more likely to pay attention to a broad philosophical treatment of the whole question, with a systematic examination of causes, symptoms, and results.

Such a task, however inviting, would be far outside the limits of this short paper. For present purposes I will assume that the evils of excessive drinking are granted. I will draw no lurid picture of how the demon drink plays havoc with the homes and the lives of all classes of society; of how it brings disease and suffering and death in its train. Nor will I attempt to discuss the broad question of why men drink. At the same time I may perhaps be allowed to classify what are in my opinion the chief causes of intemperance. They are briefly as follows:

1. Fashion, a powerful lever. Habits of excessive drinking have ceased to be fashionable among the wealthier classes, and are now in vogue chiefly among the poor.

2. Weakness of body, hereditary or acquired, leading to a natural desire for stimulus for heart and brain.

3. Weakness of brain, also hereditary or acquired; closely connected with bodily weakness, and shown by want of control.

4. Temptation, which abounds on every hand, owing to the absurdly disproportionate number of places licensed by government for the sale of drink.

5. Acquired habit; as the health is undermined and self-respect destroyed, drinking becomes a fixed habit.

6. Individual environment, such as starvation, poverty, overwork, idleness, unwholesome dwellings and workshops, leading to weakness of mind and body, and so predisposing to alcoholism.

My part of the subject is to show how the environment of an unwholesome workshop may drive a man to drink.

First of all, apart from mere unreasoning custom, I im-

agine that the desire for drink, in the earlier stage at any rate, is purely physiological. In other words, a man drinks for the two reasons that he is thirsty and exhausted. For instance, if engaged in a hot and laborious calling, such as iron smelting or baking, he finds temporary comfort and aid in alcoholic beverages. His thirst is quenched and his flagging heart stimulated in a quick and speedy way by a draught of ale or porter.

Besides heat and hard work, however, the workman is often exposed to other injurious influences. In a workshop where the ventilation is defective, for example, he is exposed to the injurious effects of carbonic acid gas, given off in respiration, by gas jets, and by furnaces. It must be remembered, moreover, that a man when working hard throws off much more carbonic acid than when at rest, and therefore needs a greater air supply. The following table furnishes a fair idea of these varying conditions of waste and demand:

	CO ₂ given off per hour in cubic feet.	Fresh air needed hourly per head in cubic feet.
Adult male at rest,	0.72	3,600
“ in light work,	0.95	4,750
“ in very hard work,	1.96	9,800

That is to say, an adult gives off more than twice the ordinary amount of carbonic acid when at hard work, and requires nearly three times more air than when at rest. From these figures it is clear that a workshop demands a specially abundant supply of fresh air. What are the actual facts of the case? I imagine those who are acquainted with the average condition of workshops in this country, sanitary inspectors and others, will tell you that not only is ventilation in the majority of instances totally inadequate, but also that overcrowding is the rule rather than the exception. With regard to overcrowding it is no doubt difficult to fix a standard of cubic space that should be exacted for each workman. In barracks the minimum allowance is 600, and in prisons 800 cubic feet for each occupant, but in each case it must be noted that free ventilation is insisted upon. Would it not

be feasible to impose a general minimum average for all trades of 300 cubic feet for each workman, permitting that minimum only when accompanied by proper ventilation? It is obvious that some trades require a larger amount of air space for workers than others. Thus in bakeries, to which my friend Dr. Waldo and I have given special attention, we are of the opinion that at least 500 cubic feet of air space should be allowed for each occupant.

A familiar instance of the ill effect of carbonic acid is seen when a person faints in a crowded church or theatre, and then the popular, and indeed, the physiologically correct remedy is fresh air and a dose of alcohol. The workman in a badly-ventilated workshop suffers from a form of chronic carbonic acid poisoning, which gives rise to headaches, anæmia, rheumatism, lung and heart affections and general debility. In point of fact, this is just the condition in which a man goes to the nearest public-house for a stimulant as naturally as a duck would make for the nearest pool of water.

Besides carbonic acid there are of course many other injurious agencies hurtful to health in an unwholesome workshop. Among them may be mentioned, darkness, damp, and poisonous sewer gas from imperfect drainage. Special trades, again, have their own peculiar dangers, such as lead and other metallic poisoning, the irritation of dust, and the deadly action of various kinds of chemical fumes.

After a close investigation of the subject Dr. Waldo and I have come to the conclusion that the badly constructed and unhealthy bakehouse is to a great extent answerable for the drinking habits that unfortunately prevail among the journeymen bakers. We take that class because it has come especially under our notice, but in many other trades there is no doubt as great or a far greater amount of intemperance.

If we compare mortality according to occupation and classify certain specified causes of death we obtain some interesting results as to the diseases and trades closely asso-

ciated with alcoholism. It is extremely difficult, however, to steer clear of fallacies in dealing with statistics of this sort. Dr. Whitelegge, however, has laid down a general statement that statistics tend to establish the relation between intemperance and diseases of the heart, liver, kidneys, and nervous system, and also phthisis, gout, and suicide.

Broadly speaking, it may be assumed that men who spend the greater part of their time at indoor work are likely to be of impaired vitality. The difference is shown by the enormous disparity of the rates of mortality between the town and the country laborers. The longer life of the countryman is probably due to the fact that he spends most of his time in the open air, and has little opportunity for indulgence in alcohol. Otherwise he shares many of the unfavorable conditions that apply to the town brethren, such as bad housing, scanty food, poor pay, and long hours of labor. The London general laborer has a mortality three times as great as that of a corresponding class in the country.

Enough has been said to show that the question of occupation and environment in relation to mortality is both wide and complex. If, however, it can be shown that an unwholesome workshop is one of the causes that lead men to crave for a physiological stimulant, we have at once the key to a preventive measure capable of wide application. Place the workman under proper conditions in his workshop and he will be less likely to crave for drink. The definition of "proper conditions" is by no means an easy one to make. It is clear that the matter cannot be disposed of simply by handing it over to the medical officer of health. There are other important economic factors that must be taken into consideration. Hours of work, for instance, will have to be shortened to a reasonable length, in order that the workman's bodily strength may not be unduly taxed. He should have a fitting time and place provided for his meals. He should also be able to command a fair living wage, so as to procure for himself good food, clothing, and housing.

Here, then, is a sufficiently wide field for the energies of the temperance reformer. An old proverb reminds us that it is ill talking to a starving man. In my opinion it is just as useless to preach temperance to a man who is daily and hourly weakened in mind and body by exposure to long hours of labor in an unwholesome workshop.

Finally, I may say that I have found even this small section of the subject of inebriety to be beset with difficulties. In our present state of knowledge it seems hopeless to attempt any formal proof of the views I have advanced. My remarks have been necessarily for the most part of a general character, and I feel that their possible value may lie in a certain suggestiveness. At the same time I have endeavored to avoid the faintest approach to dogmatism.

The conclusions I draw are :

1. Anything that weakens the health of the individual predisposes him to resort to alcohol.
2. That an unwholesome workshop, by undermining the bodily and mental health of its occupant, leads him to seek physiological relief in alcohol.
3. That the temperance reformer should also be an earnest health reformer.

DISCUSSION.

Dr. Waldo, medical officer of health for Southwark, thoroughly endorsed what had been advanced by Dr. Walsh. With reference to the true mortality of alcohol, he said, "In my report for 1892, I remarked that the deaths attributed directly to chronic alcoholism and to delirium tremens did little to indicate the actual loss of life due to the abuse of alcohol. I further pointed out that the natural wish to spare the feelings of surviving relatives prevented the returns from mentioning the real cause of death. Hence the offensive term "alcoholism" was often replaced by one of its secondary results, such as disease of the liver, brain, kidneys, or stomach."

With this fact in view the following suggestion was made :

“That a nearer approach to truth as regards alcoholism and certain other diseases could, I think, be arrived at were it made obligatory, in future, for medical practitioners to forward all death certificates, in confidence, direct to the registrars, instead of handing them to relatives, which is at present the usual procedure.

Since the above was written the select committee appointed by the House of Commons to report on death certification, has recommended “that medical practitioners should be required to send certificates of death to the registrar, instead of handing them to the representatives of the deceased.”

The following is a list of those children suffocated while lying in bed with their parent or parents during the year 1893, together with the particular day of the week on which they died :

Sunday,	.	.	.	.	.	.	.	1
Monday,	.	.	.	.	.	.	.	2
Tuesday,	.	.	.	.	.	.	.	0
Wednesday,	.	.	.	.	.	.	.	2
Thursday,	.	.	.	.	.	.	.	1
Friday,	.	.	.	.	.	.	.	2
Saturday,	.	.	.	.	.	.	.	5
								<u>13</u>

Comment on this list is needless.

Mr. H. H. Collins, surveyor for the city of London, and Vice-chairman Paddington Sanitary Committee, looked more to education of the people in sanitary knowledge than to new Acts of Parliament. The law, if carried out, would be very beneficial. Insanitary conditions led to drinking, and in the interests of sobriety the people's surroundings should be made happy.

Dr. Allen, medical officer of health for the Strand district, concurred as to the unhealthy condition of workrooms creating a tendency to force people to drink. With the polluted air so often to be found no wonder that a craving was engendered which found speedy relief in drink. He held that in every domestic workshop there should be 400 cubic feet for each worker.

Dr. Longhurst thought too much stress had been laid on insanitary conditions as driving people to alcohol. He had seen great overcrowding in India in bakehouses, etc., and natives literally forced to rush out to drink and assuage their thirst, but the drink was water. Heredity and other causes operated more strongly.

Mr. Raper pointed to omnibus and cab-drivers as free from polluted air, but as being considerably intemperate. Insurance statistics showed that the alcohol itself was the destroying agent.

Mr. Gandy held that while bad sanitary conditions should be remedied, temptation ought to be diminished.

The president said that there was no true antagonism between temperance reform and sanitary reform, both reforms running on the same lines. Indeed, abstinence from intoxicants was real sanitation applied to the individual, being simply the avoidance of the introduction of lowering poisons into the human system. Vitiating air and a foetid atmosphere predisposed to drunkenness by their depressant influence, and this predisposing cause, with a variety of other physical predisposing causes, should never be lost sight of.

THE CURE OF INEBRIETY.—The drunkard is curable in at least one-third of the cases. The basis of cure is forced and prolonged total abstinence, which should be instituted at once. Delirium tremens does not result from suddenly stopping the alcohol; its only results are headache, malaise, and sweating. The treatment should be undertaken only where the patient may have calm surroundings and a military discipline; some drink, which will quench the patient's thirst and give him pleasure, should be substituted for the alcohol. Treatment should last at least for one year, and before it is terminated the force of the patient's resistance should be tried. When the treatment is concluded some moderate surveillance should still be exercised. If a certain trade or profession has been a causative factor it should be abandoned.—*Marandon de Moxytel in Annal. Med. Psych.*

AUTO-TONÆMIA IN DRUG HABITS.

BY WILLIAM F. WAUGH, A.M., M.D.,

Professor of Practice, Chicago Summer School of Medicine; Professor of Medicine, Chicago Post Graduate Medical College, etc.

Without having occasion to withdraw anything I have written concerning the drug habits, I am inclined to regret that I ever published an article upon them. I would like to hunt up those papers and add to each as a postscript that the remarks applied to the cases on which they were based exclusively, and not to narcomania in general. For the cases vary so much that they defy classification, and the symptoms, causes, and treatment in one case may be precisely contradicted in the next. Even physostigmine, the best of the remedies, has its limitations. In many cases it is of great value; in others it has proved useless, in some even injurious.

In the management of narcomania there is no royal road to success. Each case must be individually studied and be treated as its special symptoms require. Physostigmine has proved best suited to cases with capillary stasis, constipation, fever, and delirium following trifling excitants, when the disease has been of long standing, with many relapses, and when alcohol has been used freely, as well as morphine. But in one such case, where cocaine and tobacco had also been used to excess, and the heart's power was materially weakened, the physostigmine in doses of gr. $\frac{1}{10}$, produced toxic effects at once. When this alkaloid has proved unsuitable, one of its congeners sometimes succeeds, such as muscarine, solanine, pilocarpine, caffein, etc. On the other hand the antagonistic groups, the atropines, picrotoxin, strychnine, brucine, cruraine, etc., prove so decidedly useful in other cases, that one is perplexed to account for these observations.

Possibly the explanation is to be found in the study of

the phenomena attending the prolonged use of toxic agents. When asked why persons who would be fatally affected by a grain or two of morphine, after using it a long time are able to consume a drachm daily with impunity, we answer that they have become accustomed to it. But this is only a re-statement of the fact, and not an explanation of their immunity. Why are they immune?

My observations in treating many cases of various drug habits, suggested the following hypothesis: When any toxic agent is taken into the system, there is developed in the body an antidote—a counter poison. If the dose of the drug taken be increased slowly, *pari passu* with the power of the system to elaborate a corresponding dose of the antidote, the toxic effect is prevented. If the taking of the poison become habitual, the production of the counter poison becomes also habitual. If, then, the taking of the drug be suddenly stopped, the elaboration of the antidote does not necessarily cease at the same time, because its production has become a habit. Hence, what we term the withdrawal symptoms, following the disuse of a drug habit, are really symptoms of poisoning by the systemic poison, which, no longer needed to antidote the drug taken, exerts its toxic action upon the body producing it. If this hypothesis be correct, we will see, when the habitual drug is withheld, the symptoms due to the leucomaine; and the treatment of this stage will consist in endeavoring to prevent the formation of this organic alkaloid, and in antidoting its effects. Certainly the most direct antidote will be the drug habitually taken, and hence the gradual withdrawal is better, so far as relieving pain is concerned, than the sudden stoppage. But our experience has been that it is still better to substitute for the habit-drug some other antagonist of the toxic leucomaine.

The study of the phenomena of intestinal sepsis has shown that in the intestinal canal are produced two toxic bodies, known as the atropine alkaloid and the muscarine alkaloid. Whether it is in the intestinal canal or elsewhere that the toxins in narcomania are produced, I know not; but as the trend of professional opinion is setting strongly

toward considering the intestinal canal the laboratory in which are elaborated the toxic principles of uræmia, diabetes, and many other affections, it is at least possible, even probable, that the toxin in these cases of morphinism, alcoholism, etc., are also prepared in the bowels. If this be the case, the treatment of the narcotic habitues should be improved by the use of agents that render the intestinal canal aseptic.

The following case is the only one I have as yet treated on this principle, but its history is in some degree confirmatory of the hypothesis proposed.

A physician, aged forty years, began the use of morphine to relieve asthmatic attacks, and soon became a habitual consumer. He took the drug hypodermatically, up to eight grains a day, in four doses, with a small dose of strychnine nitrate. This use of strychnine was peculiar. In all cases where I have given strychnine to morphinists, the hyperæsthesia has been aggravated and the suffering increased. The night following his admission to my private hospital he had a very severe asthmatic paroxysm, not relieved by aspidospermine or by trinitrin. The next day he took a purgative dose of calomel and magnesia, and the bowels were emptied by a large enema, passed high up through a long tube. This was repeated a number of times during the following week, bringing away large masses of dark, hardened feces, until finally the stools became natural. Calomel and sulphate of magnesia were still given in small doses daily, and an antiseptic drink containing eucalyptol and zinc sulfocarbolate. To prevent the asthmatic seizures a full dose of quinine sulphate was given at bedtime; fifteen grains at first, gradually lessened to seven. I will say here also, that quinine has not as yet proved of any special value in the treatment of morphinism, the hyperæsthesia being unaffected by it, and the tendency to hallucinations increased.

The morphine was reduced rapidly for four days and then discontinued; the strychnine was continued until the fifteenth day and then stopped. No substitute was given, or other medicine except as a placebo. Cold baths were employed from the end of the first week. He did not lose a

night's rest nor a meal, did not keep to his room nor absent himself from the table for a meal; in fact, the amount of suffering from discontinuing the drug was too trifling to be worth mention. The first day he did without the strychnine he sat about the house "feeling rocky," he said; but he bathed, ate, smoked, etc., and played cards as usual; and this trial, trifling as it was, was greater than that which followed the deprivation of the morphine. During the whole time, care was taken to keep all the emunctories, the skin, kidneys and liver in active operation. There is generally with narcomaniacs a decided tendency to sluggish or deficient action of the excretory organs; and also a deficiency in the supply of the digestive ferments.

Before this patient had discontinued his strychnine he wanted to return to his business, feeling perfectly well and eager for his work. I detained him for another week on account of his asthma, as I desired to see if it would recur when the quinine had been discontinued; but as far as the morphinism was concerned, he was a well man in two weeks from the day he began treatment.

Men who have taken the drug in but small doses for a short time, and who are as yet of good physique, have broken the habit and returned to their work in two weeks, after an ordeal that tried their utmost powers of endurance. The case I have just described is the first I have known who got well in so short a time with but little suffering. He was a man of good nerve, but deficient in physique; his muscular system undeveloped, and his digestion weak. I can only attribute the favorable result to the care taken in keeping the alimentary canal in an aseptic condition. I would be much more confident of the permanency of the cure if he were to go to a gymnasium for six months; get up a little home gymnasium, with Indian clubs and a pulling apparatus, and remove to a locality where he would be free from asthma. For a sound, equably developed body is a good thing to have, and perfect health needs no drugs.

103 STATE STREET, CHICAGO.

ANNUAL REPORT OF WALNUT LODGE HOSPITAL, HARTFORD, CONN.

During the year 1894 fifty patients have been admitted to this hospital. This, with the eight cases under treatment at the beginning of the year, makes fifty-eight persons treated. Fifty-two of these cases were discharged, and one died the second day after admission. The following table represents the class and character of these cases. Many of them were mixed and complex in the causes, symptoms, and progress.

Periodical Inebriates,	20
Constant Inebriates,	12
Dipsomaniacs,	2
Opium Inebriety,	4
Opium and Alcoholic Inebriety,	5
Cocaine Inebriety,	3
Chloral, Ether, Ginger, and other Inebriates,	4
Complex Inebriates, using any narcotic that was most convenient,	6
Spirits used medicinally for insomnia and debility,	2

In all these cases except the last two, there was the characteristic morbid impulse or mania to obtain relief from and by the use of spirits and drugs, under all circumstances. Periodicity is not common, except in alcoholic cases. Other inebriates have no free intervals, but continue the use of the drug constantly. Complex inebriates are cases who at one time use opium to excess, then turn to alcohol, chloral, ether, chloroform, cocaine, and any drug which gives relief. These cases are usually incurables, and go the rounds of asylums, and are recorded as cured of some particular addiction at each place. One such case has been treated in four different asylums, for alcohol, opium, cocaine, and chloral inebriety, and will no doubt continue as an inmate of different asylums as long as he lives. In two cases, spirits had been advised by the physician, one for general debility

with threatened lung trouble, the other for insomnia and nervous prostration. In both the use of spirits had increased to such proportions that they were brought for treatment. The withdrawal of spirits was followed by recovery. Two of the cases of cocaine inebriety began to use cocaine first for nasal catarrh. All three cases were physicians, and two were in special practice; the third was a general practitioner, who began to use cocaine as a tonic when exhausted. In a study of the causes, more attention has been given to exhaustive family histories, and the term heredity has been separated into three divisions. The first, direct heredity, is the appearance in the children of the same diseases and defects as seen in the parents. Second, the indirect heredity, is where the inebriety of a remote ancestor appeared in the grand or great-grandchildren, the members of the families intervening manifesting neurotic defects and degenerations. The collateral heredities are cases where inebriety, epilepsy, hysteria, paranoia, consumption, and other nerve and brain defects have appeared in each generation, apparently alternating and depending on some special favoring causes. The following is the table:

Heredity, Direct,	16	Traumatism,	8
Heredity, Remote,	13	Exhaustion,	4
Heredity, Collateral,	14	Environment and Contagion,	3

The term traumatism describes a class of causes that date from shocks and injuries and sudden, severe mental strains, associated with unconsciousness. Some of these cases began to use spirits on recovery from acute inflammation, others commenced after psychical and complex physical shocks. Cases included under the term exhaustion began to use spirits after profound debility and conditions of acute anemia, also cell and tissue starvation. Environment as a particular and only exciting cause is rare; in the three cases observed it was the most prominent factor. As an exciting cause developing latent tendencies it is common in many cases of heredity. A more exhaustive study of these

cases might have revealed some other causes. It is a fact not recognized, that in a certain number of cases the first symptom is a desire to associate with low people in very bad surroundings, and the use of spirits comes on gradually. The impression is that environments are the causes; in reality, some unknown palsy of the higher brain has begun, and the desire to be with low people in bad surroundings is only a symptom. The inebriety is also a symptom, and imbecility and paralysis are the common sequels.

Of the ages and general conditions of the persons treated, the following tables are presented :

AGE OF PERSONS UNDER TREATMENT.

From 20 to 30 years of age, 11	From 50 to 60 years of age, 6
From 30 to 40 years of age, 25	From 60 to 65 years of age, 1
From 40 to 50 years of age, 15	

SOCIAL CONDITION.

Married and living with wife, 22	Widowers, 5
Married and separated from wife, 11	Single, 20

OCCUPATIONS.

Physicians, 9	Judge, 1
Lawyers, 4	Engineer, 1
Farmers, 3	Hotel-keeper, 1
Bankers, 3	Importers, 2
Clerks, 6	Liverymen, 2
Veterinary Surgeon, 1	Drummers, 3
Manufacturers, 2	Gardener, 1
Teachers, 4	Undertaker, 1
Builders, 2	No occupation, 2
Lumberman, 1	Women :—
Speculators, 2	Housewives, 2
Druggist, 1	Teacher, 1
Merchants, 2	No occupation, 1

DURATION OF THE INEBRIETY.

Less than 5 years, 6	From 15 to 20 years, 5
From 5 to 10 years, 19	Over 20 years, 4
From 10 to 15 years, 24	

EDUCATION.

Collegiate, 17	Academic, 24
University, 5	Common School, 12

Report of Walnut Lodge Hospital, Hartford, Conn. 159

NATIVITY.

Connecticut,	10	Nebraska,	1
New York,	16	Missouri,	2
New Jersey,	5	Wisconsin,	1
Rhode Island,	2	Illinois,	1
Massachusetts,	3	Canada,	2
Pennsylvania,	4	Texas,	1
Vermont,	2	Ireland,	1
Ohio,	4	Maryland,	1
California,	1	District of Columbia,	1

FORMER TREATMENT IN OTHER HOSPITALS.

Received treatment at Keeley Institutes,	26
Treated by other Gold-Cure Specifics,	11
Treated at other Hospitals,	6
Never treated before,	15

The number of relapsed cases from the various specific gold cures is increasing, and the possibility of their recovery seems more difficult than in other cases. Delirium and extreme prostration are common symptoms, and spring up from the slightest exciting causes. Defects of vision and visual hallucinations are also common. The relapses of these cases resemble acute insanity in symptoms and duration.

Of the results of treatment, the following is the approximate record:

Recovered,	18	Benefited,	12
Improved,	23	Died,	1
Unimproved,	5		

Those who are discharged and go back to active life with excellent promise, and who are known to be doing well, are recorded as recovered. In this class are those cases in which local and hygienic causes are prominent. It is believed that the removal of such causes and the restoration to health constitutes, to a large degree, the measure of their curability. The second class, marked improved, are the paroxysmal cases, whose drinking is a distinct neurosis, and who may possibly relapse, after long or short free intervals of sobriety, from causes that are unknown and unantici-

pated. Of the third class, unimproved, two were opium inebriates and one a cocaine-taker. After a short period of treatment, they refused to give up the drug and were discharged. The others were inebriates who went away in a few days without any results from treatment. The third class were termed benefited, but remained so brief a period that, while improved for the time, no positive results could be expected. One died from cerebral hemorrhage the second day after admission.

All institutions for the cure of inebriates are unable to keep the patients long enough to secure a degree of restoration that gives reasonable promise of permanency. The law gives us full power to hold cases four months, while in most cases twelve or eighteen months is far too short a time. All institutions suffer seriously from the difficulty of securing records of restored cases. Persons who recover make unusual efforts to conceal the fact of having been under treatment, and even deny it as an act of disgrace. On the other hand, incurables and relapsed cases become the most bitter detractors and prominent critics and defamers of the institutions. Hence public opinion of the real work in an asylum is often unfair and misleading.

The physiological studies of the past year have been continued with the additional aid of the sphygmograph, and special studies of the action of the heart. Muscular impairments have been studied with a dynamometer, and various tests of the disability of the muscles and senses have been made. The special studies of heredity have been continued with increased interest, and it is expected to publish at an early day some very interesting conclusions. Inquiries of the present condition of cases under treatment before 1885 have been made during the year. The results, so far, of the reported histories of sixty-six cases, show that sixteen are living temperate and well, not having relapsed, and are considered cured; twenty-one died, all relapsed, and death was more or less the result of the relapses; four became insane, and are confined in asylums; ten have become hopeless

inebriates, and fifteen are still drinking at irregular intervals. Most of this number have tried gold-cure and other asylums, with only temporary relief. These figures are reported as very suggestive and encouraging.

The special work of this institution, to combine all the best scientific measures known with the comforts and seclusions of a home and special personal care of each individual case, has been very warmly commended during the past year. The *London Hospital Journal* for December, 1894, and many other medical journals of this country, have published very flattering descriptions of the work of this Hospital. The increased use and value of baths continue to become more prominent every year, and this, with other appliances, brings increased confidence in the permanent restoration of an ever-increasing number of persons, as the years roll around.

ALCOHOL has the power of degenerating nerve-fibres. It is especially an irritant to the pneumogastric nerve and has an especial destructive affinity for that nerve. The children of parents who suffer from alcoholism are, in a tremendous percentage of cases, the victims of consumption. In fact, the children of parents who are even moderately hard drinkers always prove the easy victims of consumption. Furthermore, the records show that hard drinkers themselves are particularly susceptible to consumption, and that alcoholism in a very great percentage of cases leads to consumption. These facts are due to reflex action over the pneumogastric nerves.

A FATHER MATHEW CHAIR.—The Catholic Total Abstinence Union has established a professorship in the Catholic University at Washington, known as the "Father Mathew Chair." The Rev. Thomas Conaty, D.D., has delivered the first of a series of annual lectures on temperance thus secured to the university.

REPORT OF THE MASSACHUSETTS INEBRIATE
HOSPITAL AT FOXBORO, MASS.

This is the only asylum in the world where the problem of the pauper inebriate is being practically solved. The State of Massachusetts has erected fine hospital buildings on a large farm in the country, and now sends the incorrigible and indigent inebriate to this place for restraint and treatment.

The following extracts from the reports of the trustees and physician are most suggestive of the obstacles and struggles of this great pioneer work which will occupy a large share of public attention in the coming years.

It is now about eighteen months since the hospital was opened and the first patient received. In these first months many difficulties have arisen, as was to be expected in trying to start into existence a new institution. During the last year patients have continued to be committed under a mistaken idea of the laws governing the institution and the purpose for which it was founded, though to a less extent than a year ago.

Some are committed by their friends for "punishment," and when, after a short stay in the hospital, they have been, in the opinion of their friends, sufficiently punished, fault is found with the institution because they are not released upon their own request or that of those so committing them. Others are sent there simply that they may be locked up, where they can be kept from being a trouble and a nuisance to their friends; while the fact that the object of the hospital is to treat inebriety, and, in such cases as it is possible to do so, to cure the patient of the disease, is in these cases and many others quite or entirely lost sight of by those sending them, and much objection is raised when it is found that they must submit to the laws governing the hospital and the treatment instituted there.

The hospital is not a penal institution, and consequently is not protected against escapes of the patients by walls or guards about the grounds. There have been, therefore, many escapes; but they have decreased in number considerably during the year, while the number of voluntary returns of patients who after their escape have found they needed the protection and care of the hospital more than they had realized, has steadily increased.

Such patients as the superintendent believes can be trusted are paroled — that is, given the liberty of the grounds from breakfast until supper, which not merely increases the time that a patient can remain in the open air, and so helps to build up his health and repair the injury done by liquor to his physical system, but this reliance on his honor acts most favorably on his moral and mental condition, and the self-control thus gained assists him to resist the temptation to drink when he is once more thrown upon the world on his release from the hospital.

It is most important that the patients should be kept constantly occupied, for the health of both mind and body and for the establishment or restoration of the habit of industry, which is commonly entirely lacking in them. It has been difficult to devise means of keeping all the patients busy. Some are employed as assistants in the various departments, kitchen, laundry, and so forth, of the hospital. During the warmer months of the year others are employed on the farm; but for the employment of many in the summer, and of most in the winter, a workshop of some kind was needed. The trustees began a year ago, as stated in the last report, a small workshop, which has since been finished. In this there is, on the lower floor, a carpenter shop, where the repairing for the institution is done, and a paint shop; on the second floor there is a broom shop. The making of brooms has proved a marked success. The work is light, easily learned, and in one part or another of the process employment can be found for those mentally or physically weak, as well as for the stronger and more able-bodied.

From the paint shop, as a basis, the walls of nearly all the rooms and corridors in the buildings have been painted, and the woodwork, both inside and out, done over by the patients.

As has been stated, it has been found difficult to devise means of employing certain of the inmates. One source of the difficulty has been the unwillingness of the patients to do what is asked of them. There is a considerable number of refractory patients, who will not work unless a parole is given them, but who would escape as soon as paroled. This class is being slowly diminished in number, as they learn to realize that employment does improve their condition physically, mentally, and morally, and helps materially to place them finally in a condition when they may be released from the institution.

A system of gymnastic exercise and baths was introduced last June, and has proved most beneficial in every way to such patients as have taken it, and gradually the number of these has increased and is still increasing. This exercise is under the direction of a well-trained and skilled gymnastic teacher. One of the day rooms has been utilized as a gymnasium, and a garden hose with water that can be graduated to any temperature has to answer for the bathing establishment. These exercises make the mind more alert, train the muscles and the will power over the muscles, and so over the man. By the muscular exercise the effete matter and poisonous accumulations in the body, the results of the prolonged use of alcohol, are thrown off and replaced by new tissues in the body and brain. The bath acts as a most powerful stimulant, especially to the nervous system; indeed, some feel so directly stimulated by the bath that they willingly take the muscular exercise for the sake of the bath which follows. The results obtained from this physical exercise and baths have been most satisfactory. It is hoped that we may be able to have some time in the future a properly constructed gymnasium and bathing establishment.

It should be borne in mind that many of the patients at the hospital are of the worst type of inebriates. Some do

not care to be cured, while nearly all are sent there more or less against their will, and so do not give their active assistance and co-operation in the treatment, which is most necessary in treating successfully all diseases of this class. Many of the men have been already under treatment in other institutions, both public and private, before their commitment to Foxborough, and, indeed, are finally sent to this hospital merely that they may be under legal restraint, and, as already stated, not with any idea on the part of their friends, or of the physicians committing them, that they can be cured.

The superintendent, with the help of the assistant superintendent, has made, this summer, personal inquiries into the condition of all those who have been discharged from the hospital, traveling from one end of the State to the other for this purpose. The results have been gratifying. Of those cases regarding which we have been able to obtain positive knowledge, it has been found that 42.14 per cent. are "doing well," which means, as far as the investigation could determine, that they have been entirely free from inebriety since leaving the hospital; that some 14 per cent. are "improved"; while 43.80 per cent. are left as "unimproved," — all of which is set forth in detail in the report of the superintendent. Inasmuch as the time since the different patients had been released from the hospital varied from two to fourteen months, cases which had been out less than two months not having been considered, it is probable that some of those, now reported to be "doing well," will yet relapse.

Attempts to smuggle liquor into the hospital have been, and are always liable to be, made. The trustees see no reason why the protection afforded by law to the penal institutions in this matter should not be extended to the hospital.

Although there are now in the hospital more patients than at any previous time, the wards are not yet full, and it will be impossible during the coming year to meet the expenses from the board of patients; hence the trustees re-

quest an appropriation for part of the current expenses in 1895.

In the superintendent's report occurs the following: This is the first full or complete year since the opening of the hospital on February 6, 1893.

There were 108 persons in the hospital on October 1, 1893. Since that date there have been 163 admissions. Of these, 153 were by order of commitment from the courts; of the other 10, 4 were returned from leave of absence granted during the previous year, and 6 from elopement during the same year. There were then 271 cases under care during the year. These 271 cases are represented by 265 persons. One person has been committed twice by order of court within the year, having received his second commitment while out on leave of absence from his first. Two were recommitted while out on leave of absence granted during the present year. Three had been discharged from the hospital during the present year by reason of the expiration of the two years fixed by the law as the maximum period of detention.

As the hospital will not have been open two years until February 6, 1895, no person has been a resident in it for the maximum period. Those who have been discharged by expiration of the maximum or two-year limit are persons who were originally committed to the hospitals for the insane, and transferred to this hospital soon after its opening. In their cases it was the judgment of your board to consider the time spent in the hospitals for the insane as time spent in this hospital, and to discharge them accordingly at the expiration of the two years from the date of their commitment to the hospital for the insane.

During the year 25 were given final discharge, 3 by death while in the hospital, 2 by death while out on leave of absence, 1 by death while on visit to the Massachusetts General Hospital for operation, 9 by transfer to a hospital for the insane, 1 by time limit while out on leave of absence, 5 by time limit while in the hospital, 3 by recommitment, being

at the time out on leave of absence granted within the present year, and 1 by order of court as not being a dipsomaniac.

Of those who eloped or were granted leave of absence during the year, 29 and 107 respectively remained away at the close of the year, as absent, not finally discharged, their maximum time not having expired.

Of the 41 reported Sept. 30, 1893, as absent, not finally discharged, on Sept. 30, 1894, there were still absent, not finally discharged, 8 by elopement and 11 on leave of absence. Of the others, 4 had been returned from leave of absence, 6 from elopement, 2 by recommitment while on leave of absence, 5 had been discharged by time limit while on leave of absence, and 5 while out on elopement.

The daily average of patients was 101.08; the average weekly cost of support per patient was \$8.41+.

There has been no special or epidemic sickness among the patients or employes.

Three patients have died within the year, the causes of death being pulmonary tuberculosis, alcoholic neuritis with delirium tremens, valvular disease of the heart.

Employment has been provided in the usual ways in the various departments, both in and out of doors. No more wage-earners have been employed than are necessary for a proper supervision and performance of the work, which otherwise would fail easily through the frequent changes among the patients, many of whom have no previous training in or taste for the work to which they are assigned. Apart from the laundry, kitchen, and dining-rooms, for some of the more visible results of their work, your attention is called to the painting of the interior walls of the various rooms and halls of the three cottages and dining-room building, which is now completed and has been done solely by the labor of the patients. Great progress has been made in the redressing and varnishing of the ash finish of the buildings.

Your attention is also called to the products of the farm, as shown in an appended list, in which the valuations are made at a wholesale or jobbing price. Except a portion of

the milk, all these products are consumed at the hospital. Some progress is being made in grading the roads about the buildings this fall.

During six or seven months of the year the broom shop has been in operation, under the supervision of a skilled broom-maker, affording occupation for from eighteen to twenty-two men. There is sufficient variety in the various steps of making the broom to afford occupation for the infirm as well as the vigorous, and to preserve the interest of those who are engaged. Thus far the work has proved self-sustaining.

In June last, by action of your board, the services of a skilled teacher of gymnastics were secured, and provision made for the exercise of the patients in classes for physical culture. At the outset only free movements were attempted, later, chest weights were added, also the out-of-door games of medicine ball and basket ball. It is now proposed to add to the variety of the exercises by the use of wands, dumb bells, and horizontal bars. Under the direction of the instructor the exercises and classes have been arranged in a manner adapted to the needs and ability of the young and the old. As an essential part of the exercise, each class at its close is required to take a spray bath at a regulated temperature. About one-sixth part of the patients are unable to take part in the exercise by reason of some serious infirmity or organic disease; as many more refuse to take part for no sufficient reason; others cease taking it after a longer or shorter trial; while some have sufficient exercise by reason of the hours and nature of their work, so about one-half of them take the exercise with regularity. That the physical culture is of positive benefit in the renovation of the diseased tissue is manifest in the cases of many of those who persist. There is evident brightening of facial expression, increased promptness in the working of the mind, greater elasticity of movement, with increased capacity for and interest in work.

Between the 6th of July and the 10th of August of the

present year, an effort was made to obtain reasonably accurate information concerning those who had been discharged from the care of the hospital prior to May 6th, were still absent from the hospital on July 6th, and had been exposed to all the trials and temptations presented in daily life. As indicated, the inquiry was directed towards those who had been discharged from the hospital for two or more months. The purpose of this inquiry was to ascertain how many individuals were unimproved, or drinking as much as ever; how many were improved or drinking less; and how many were doing well, or had been abstinent since leaving the hospital.

In conducting this inquiry little use was made of correspondence, it being thought better to make a personal inquiry in the several towns and cities from which the men had been committed. As it best could be, information was obtained from the town authorities, certifying physicians, police and probation officers, friends and relatives. In very many instances the individual was seen.

Prior to May 6, 1894, from Feb. 6, 1893, the date of the opening of the hospital, a period of fifteen months, there were 248 admissions, of which number 6 were recommitments; therefore, 242 persons were admitted prior to the given date. Of these 242 persons, 88 were remaining in the hospital on May 6, 1894, 63 by continuous residence, 10 by return from leave of absence, *i. e.*, unimproved, and 15 by return from elopement; therefore, 154 persons had gone from the hospital.

For the purpose of the inquiry, 43 of the 154 persons are excluded for the following reasons: 3 had died while in the hospital, 4 had died after leaving the hospital, 7 had been discharged as being insane, 1 had been discharged by order of the court as not being a dipsomaniac, 2 could not be traced, and 26 had eloped. This leaves as subject to the inquiry, 111 persons who had been discharged from treatment prior to May 6, 1894, and were still absent from the hospital on that date. Of these, 12 were returned to the hospital between May 6th and July 6, 1894, as relapsed or unim-

proved cases, while 99 continued absent on July 6, 1894, two months after the date of discharge of the last person under consideration. If to these 111 persons are added the 10 relapsed and returned prior to May 6th, 121 is obtained as the whole number under consideration.

Of these 121 persons, it was ascertained that on July 6, 1894, two months after the discharge of the last person under consideration, 51 were regarded as doing well or abstinent, 17 as improved or drinking less, and 53 as unimproved or drinking as much as ever. In percentages, 42.14+ per cent. as doing well, 14.04+ per cent. as improved and 43.80+ as unimproved.

Incidentally it was learned that, of those who had gone from the hospital prior to May 6, 1894, whether by elopement or regular discharge, 2 are in the Massachusetts Reformatory, 5 are or have been in the House of Industry at Deer Island, and 7 are or have been in a house of correction. Some were sentenced for crime, more for drunkenness.

I recommend for your consideration an enlargement of the present workshop building. Several times the present number of men could be under the direction of the broom-maker, provided there was sufficient floor space. This additional provision for workroom is particularly needed for the winter, when the usual out-of-door employments cease.

DIMINISHING CONVICTIONS FOR DRUNKENNESS IN ENGLAND — For the third year in succession there is shown a very notable diminution in the number of offenses in which drunkenness is involved. The total of 1893 was 153,072; for 1892 it was 159,003; for 1891, 168,999; and for 1890, 173,036. The decrease in the number of convictions since 1890 is thus seen to be close upon 20,000, or about 11½ per cent. of the total as it then stood. Moreover, in the meantime, the estimated increase in the population amounted to nearly 3½ per cent., so that the reduction of drunkenness in proportion to the population is even greater than that.

MEDICAL INSTRUCTION OF INEBRIETY IN
COLLEGES.*

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

The diseases and injuries which are directly or indirectly traceable to the use of spirits and narcotic drugs, if not increasing, are clearly becoming more prominent every year. Practical physicians, engaged either in general or special practice, assert positively, that alcohol and narcotics are very common causes and always serious complications in most of the diseases they are called to treat. Medical men with hospital and large general practice have estimated that at least twenty per cent. of all cases are suffering from the poison of alcohol and other narcotics. Many of these cases are so-called moderate drinkers, or use spirits at long intervals, or take narcotics irregularly for various purposes. A certain class of cases who drink excessively come for treatment, and the disorders from which they suffer are clearly traceable to the spirits used. Another class have complex disturbances, not so clearly due to spirits, yet recover quickly from the withdrawal of spirits and narcotics. A third class are well-marked inebriates, who appeal constantly to the profession for help, and receive the stereotyped advice to "stop drinking." There is probably not a living physician of any class or school, who has not been called for counsel and help in cases of moderate or excessive drinking.

This is increasing with every advance of scientific knowledge. The degenerations which follow from the use of alcohol, and the disease of inebriety in which the craze for spirits is a symptom, are becoming more and more a recognized fact in practical medicine. Busy physicians find clinically that alcohol is the very genius of degeneration when

* Read before the American Association for the Study and Cure of Inebriety, at New York city.

used as a beverage and continuously. Also that the drink paroxysm and morbid impulse to procure spirits at all hazards, is something more than a moral state or a weak will power. In some vague uncertain way the possibility of disease may be recognized, but how to study and what means to use in the treatment are practically unknown. The text books of medicine give little or no information, and the physician is obliged to turn to moral and ethical lines of treatment. He gives lectures, warnings, appeals, and threats, and possibly placebos, or he may administer secretly remedies to cause nausea, or give narcotics to check the morbid impulses. By these means, he expects to rouse up the weak will, or produce disgust for spirits, and thus give new power to abstain for the future; or by checking the drink impulse by narcotics destroy it. These means fail, and not unfrequently the use of morphine beginning in a prescription ends in its addiction. Chloral, cocaine, and other drugs begun in this way, are equally disastrous. This failure of the family physician to relieve or even to check the inebriety only for a short time, opens the door for all sorts of quack remedies, and charlatan schemes. The recent wild wave of gold cure specifics, with its boastful pretensions, would never have been possible had the physical nature of inebriety been recognized by the family physician and proper treatment given. Thousands of cases in despair of any better means for relief have taken these secret remedies, and received temporary relief, only to realize later that they were more incurable and the drink craze more difficult to control. Thoughtful men in the profession recognize a field of practical work in the scientific study and treatment of the inebriate, but suppose it confined to specialists. In reality, the inebriate is more curable in the early stages, at home under the direction of the family physician. The prevention of inebriety can only be accomplished here, and as in other diseases when the case is neglected until chronic stages come on, the possibility of cure becomes more remote. The use of alcohol alone in a previously healthy person is followed by poisoning with cell and

nerve starvation and central exhaustion. The use of alcohol in an unknown proportion of cases is from the beginning a symptom of derangement and exhaustion, a predisposition, or a demand for relief from some organic suffering. In all these cases poisoning, starvation, and exhaustion are present. Derangements of nutrition, growth, development, and environment, associated with inherited or acquired defects, appear in every case. These are physical facts, the knowledge of which is absolutely essential to the rational treatment. The assertion has been made by reliable authorities that one-tenth of the male population use spirits as a beverage, either in moderation or excess. At least half of this number appeal to medical men for help from disorders due directly or indirectly to the use of spirits. The chronic cases from the lower walks of life, who are inebriates, constitute a class who are ever appealing for medical assistance. Another class higher up and actively engaged in the world's work, yet suffering from the effects of spirits, mutely turn to the family physician for help, and both classes fail, the physician is unable to give relief.

He is unacquainted with this malady; he cannot understand the condition of these poor victims who are whirled rapidly down the road to dissolution by laws and forces that are largely unknown. The physical study of inebriety has reached a point where the facts are sufficiently clear and established to make it possible to teach authoritatively the conditions, causes, and natural progress of inebriety, and to point out certain general therapeutic principles available and practical in its successful treatment. From this study comes the clearest evidence that a large proportion of all inebriates are curable in the early stages, through the family physician's care and wise counsel. His knowledge of the environment and physiological conditions of the patient's life and living, enable him to use means and remedies for cure with very great certainty. The possibility of prevention and cure in the early stages along these lines are fully equal to that of any other disease, when used by the intelligent medical man.

The time has come for a public recognition of this need by the medical colleges of the country. The students who go out without some idea of inebriety from a medical point of view, are unable to treat or counsel wisely the first cases they are called on for help. While they may not be any more incompetent than other neighboring physicians to treat such cases, they are clearly without capacity and knowledge to render assistance that would give them a permanent reputation for the future. The drinking man who sends for the young physician because he is a stranger, hoping for some relief which the family physician has failed to give, is disappointed. The new physician has less knowledge than the elderly man, although he has recently graduated at the head of his class. Had he been taught some general facts of inebriety, it would have been the opening door for a successful practice in the future. There are vast numbers of men and women who are literally supporting armies of quacks and charlatans, simply because the medical men are unacquainted and unable to treat their disorders. The progress of medical science and wider range of instruction given in colleges are slowly and steadily reducing the ranks of these chronic cases. The inebriates constitute the largest class of these defectives, and the few pioneer students who are pointing out the physical side of these cases and the new realm of practice, appeal to medical colleges to instruct its students along this new line of cure and prevention. Every graduating class should have four or five lectures on the general facts which are prominent in the causation and progress of inebriety. This will enable them to not only study these cases, but act intelligently when called for counsel and advice. It is such knowledge as this that will help solve the drink problem and raise its present treatment from the realm of quackery into the field of exact science.

An eminent man in a recent speech said, "I despair of any great progress in this drink question until medical men shall take up this matter and teach us the facts and their meaning." To this I add that the time and literature and magnitude of the subject call for instruction from our med-

ical colleges. There is a demand that young medical men be equipped with some knowledge of the most numerous cases they will be called on to treat in many circles of life. The theories and delusions concerning inebriety, repeated in every community with the assurance of being positive facts, fail when tested at the bar of accurate inquiry. The supposed popular knowledge is ignorance, and the real facts will appear only from careful examination by medical men. It is from a knowledge of the phenomena of this drink problem only that means for cure and relief can be ascertained. Medical instruction of students along this new line is a need becoming more apparent every day.

ALCOHOL IN DISEASES.

In writing to the *Physician and Surgeon*, Dr. Bryan of Detroit writes thus on the use of alcohol in diphtheria :

"It is my belief that it is in diphtheria that the most dire results are to be observed. In that disease the vast majority of cases die by asthenia, or else by sudden failure of the heart. To what is this sudden cardiac paralysis due? The elucidation is as follows: In the grave cases there is almost invariably a subnormal temperature, together with great muscular prostration. Also it is a physiological fact that a decrease of the temperature slows nervous conduction. As the system is made colder the nervous force flows slower and slower. In diphtheria the heart muscle is very weak, the temperature falls, the lessened nervous energy but feebly animates the muscular fibres, and so actual paralysis ensues, death closing the scene almost instantaneously. Now, in such a state of imminent danger, brought about by such causes, what could be worse than to administer an agent which notably reduces temperature, and at the same time enfeebles muscular power? May I add, what would be the remedy in such a condition? and I answer, *External heat freely applied to the whole surface of the body.* This will prevent the cardiac paralysis whenever it is preventable."

Abstracts and Reviews.

ENGLISH INEBRIATE HOSPITALS.

Our readers will remember that for fourteen years the English Government has had an inspector who visits all inebriate retreats and asylums and makes a yearly report. We publish the summary of last year's report.

The fourteenth Report of the Inspector of Retreats, under the Inebriates' Acts, 1879 and 1888, for the year 1893, states:

With regard to the general condition of these establishments, there is no fault to find, as a rule, and the health of the patients has been very satisfactory, on the whole. No death is recorded.

There has again been a slight increase in the total number of patients admitted to the various retreats during the year. In 1891 and 1892 the admissions were 115 and 124 respectively, but in 1893 the number rose to 129.

In answer to an invitation the licensees of a number of retreats have furnished observations as to the working of the Acts and the result of the treatment.

"Fallowfield.—The Manchester Retreat for Inebriate Women was opened July 24, 1890, in accordance with the provisions of the Inebriates' Acts of 1879-88. These Acts encourage the opening of retreats either for male or female inebriates, to be conducted only by licensed managers, and subject to the approval and open always to the visits of an inspector appointed by the Crown. In fact, the law regards the treatment of habitual drunkards as somewhat analogous to that of lunatics, viewing their malady as a physical disease. And such it unquestionably is. But it is a moral disease also, which needs moral as well as physical remedies, and the successful cure of inebriety will depend on the care and skill with which these moral and spiritual remedies are applied by the

managers and committees of retreats. The law, however, concerning the detention of inebriates differs at present from the lunacy laws in two important particulars. In the first place, it makes no provision for the support of retreats, except from the payment of inmates. The attempt, therefore, to rescue poorer persons and wean them from inebriety, is wholly left to private benevolence. Now this has from the first been a prominent aim of the promoters of the Manchester Retreat. The Grove receives two classes of patients. One class consists of women of a certain social position, who pay readily for their maintenance. These live apart in the better rooms, and are encouraged to occupy themselves in their favorite pursuits, whether drawing, or painting, or the art of the needle. But a larger number are working women, who pay at lower rates, according to their means, or even nothing; they employ themselves in the necessary work of the household. As far as possible the retreat is made self-supporting by means of the work and the payments of the inmates. But the admission of poorer women — sometimes gratis, and at the suggestion of the magistrate before whom they have been brought for trial, and as an alternative to the gaol — makes the maintenance of the Grove dependent in part upon the generosity of subscribers.

“In the second place, the Inebriates’ Acts give no power to anyone to commit a patient to a retreat without the patient’s own desire. They may be committed to gaol for being drunk and disorderly, and are so committed for short periods hundreds of times over, to the mockery of justice and to the vast expense of the nation, but absolutely without any good result. In entering a retreat, however, everything is left to the inebriate. Upon being certified to be an inebriate by two witnesses (who must neither be managers of a retreat nor immediate relations of the patient), he or she may make application to two justices of the peace, and so obtain admission. Once admitted, indeed, the patient is compelled to remain for a whole year. But the mode of obtaining admission is so cumbrous, and leaves so much to

the perverse and capricious will of the drunkard, that in practice we find very few applicants proceed so far as to gain admission, and precisely the most distressing cases are those for whom the law provides no help.

“It is certain that the number of habitual drunkards of both sexes in the kingdom is so large as to constitute not only a grave scandal, but a serious burden upon the community, and, above all, a frightful source of misery to many thousands of households. It is estimated that there are at this moment 6,000 inebriate women in prison — not to speak of men similarly detained, nor of the crowds of both sexes whom drink has brought either to the workhouse or to the asylum, and quite apart from the far larger number of habitual drunkards outside of such places, who are free to indulge their fatal craving and to be the daily and hourly scourge of their homes.

“In the meantime, in spite of the difficulties caused by the insufficiency of the Acts on the one hand and by the prevalence of temptations on the other, the work of the Manchester Retreat has gone steadily on. Of the eight retreats at this moment licensed under the Act, the Grove is considerably the largest. It is certainly second to none in pleasantness of surroundings (an important element in the treatment of inebriates) and in efficiency of management. It is licensed for twenty-five patients. We are ready to confess that nearly half of those who leave us apparently cured do relapse. But amid such temptations as surround them this is scarcely strange, nor can we forbear reflecting upon the criminal folly of husbands, who, when they bring their wives to us, assure us that they would do anything in the world for their recovery, and then, when the wife goes back again a changed woman, refuse to become abstainers themselves, or to assist the wife's resolution by clearing the drink out of the house.”

“Rickmansworth.—There can be no doubt of the advisability of some more satisfactory method of dealing with criminal inebriates. The present police-court procedure in connection with this class has proved an utter failure from

every standpoint. Experience has shown abundantly that little or no benefit accrues from a short punitive confinement in prison, or from short periods of residence in insane asylums. The desire for liquor is only increased by temporary seclusion, and the prisoners on release soon fall easy victims to their previous habits. Of late the repeated expressions of opinion from magistrates and parochial boards have added force to the long-recognized fact of their inability to cope with the condition, and of the urgent need for the establishment of suitable public retreats for the reception and care of such cases."

"Twickenham.—The number of patients taking advantage of the Act here is about one-tenth of the total admissions, and this notwithstanding that we try when consulted to get the patients to come under the Act. Doubtless this will not be the case when the mode of signing before the justice is simplified. Again, there are a very large number of inquiries from patients and their friends, who eventually fail to enter any retreat at all, and these cases will be met when measures of compulsion under certain circumstances are in force, and when retreats are established wherein patients with limited means can be received. Of our admissions, half of them are in the married state and half unmarried, and the majority are hard workers, and not the lazy drones many people would have us believe. The most important fact to which attention should be called is the number of occasions in which the inebriate patient is the victim of chronic physical disease. Fully 50 per cent. of our admissions are suffering from disease other than and in addition to the liquor habit, cases of serious exhausting disease — phthisis, rheumatism, locomotor ataxia, neuritis, and other diseases are frequently met with, and it is by no means easy to appraise precisely the position of such affection in the causation of the patient's condition."

UNUSUAL CASE OF MORPHINE INEBRIETY.

Dr. McGillivray of Ottawa, Canada, reports the following case in the *Massachusetts Medical Journal*:

I was called to see a man in one of our hotels who had symptoms of delirium tremens. He was thirty-seven years of age, stout, muscular, and plethoric, and of intemperate habits, had resided in New York city for the last six years, where he practiced his profession as attorney-at-law. About the commencement of January, 1885, he had an abscess in the thigh from which he suffered severe and continuous pain, and in order to allay his agonies and induce sleep, he was given by his physician a drachm of laudanum each night, beginning of course, in smaller doses and a similar quantity during the day. He continued that prescription for a period of three months, until every symptom of his complaint had entirely disappeared; he then discontinued it, but much to his discomfort, becoming nervous, irritable, and wakeful, and subject occasionally to intolerable tremors. He was forced to resume his habit. He made repeated efforts to master his desires, and stop the use of opium in any form, but without avail, and finding it impossible to do without it, he was obliged to resume his accustomed draughts, gradually increasing the dose from time to time, as nature seemed to suggest and require it, until he had the daily habit of taking astonishingly enormous quantities. In order to satiate and appease his abnormal appetite, he found it necessary to take half a drachm of sulphate of morphia daily, some days more and some days less.

He took as much as a drachm and a half in thirty hours, and found no alarming effects to follow; he frequently took three ounces of laudanum at one gulp, and repeated the same dose within twenty-four hours, with the only effect of causing snatches of sleep lasting from one to four hours. He had always had a good appetite for food, and enjoyed comparatively good health. Abstinence from opiates was latterly followed by troublesome diarrhoea, associated with the other symptoms already named, and when sleep occurred

it was disturbed by frightful dreams. He was an inveterate smoker and a hard drinker, almost incessantly reveling in debauchery and profligacy; the more whisky he drank the more morphia he required to take. Until about a year ago he used laudanum almost exclusively, but to avoid the inconvenience arising from carrying about him such large quantities as he required to use, he betook himself to the use of morphia, of which he kept abundance on hand, but he took laudanum occasionally.

One evening after he had recovered from his illness at about seven o'clock, while I was present with him in his room, in order to assure me of the capability of his system to resist the effects of opium, an experiment I was very reluctant to witness, he opened a parcel containing twelve small bottles, each of which contained a drachm of sulphate of morphia, he took up one of these bottles and emptied its whole contents into a tumbler which he had half filled with whisky, stirred the mixture well and swallowed the terrible dose at one gulp (a quantity sufficient to destroy twenty or more lives), and in the course of fifteen or twenty minutes after drank down at one draught four ounces of laudanum, which he had procured in a drug store close by.

An hour after performing the dangerous experiment he went to spend the evening in the theatre, where he enjoyed the drama with all due complacency. I visited him at his rooms in the hotel at eleven o'clock the same evening, and saw him take nearly a fourth of a drachm of morphia in a glass of whisky, before retiring. Fearing that the experiment might have proved to much for him during the night I called to see him at an early hour the following morning, and to my utter astonishment found him wideawake, after having passed a quiet night, and apparently suffering from no ill effects of the poison. He asked for more whisky and morphia. I strongly remonstrated and cautioned him against the results sure sooner or later to follow such enormous doses of poison, and such flagrant abuse of his constitution. His only reply was, "I am used to it and there is no danger."

Satisfied and easy in his own mind that there was no danger, and that the seeming immunity he enjoyed in the past, he would still enjoy in the future, he was willing and determined to pursue his dangerous habits. Two days after he went home to his family in New York and was gone nearly four months; at the end of that time he returned to this city with the intention of taking up his residence, and practicing his profession; when he arrived here he consulted me for urethral stricture which caused him intense pain, and to allay it he was obliged to use opiates in larger quantities.

He was now feeble and exhausted, worn and emaciated, apparently fast sinking a victim to his evil habits, of the dangers attending which he was now fully convinced. He had been addicted to this destructive vice of opium-eating for nearly three years, and it had gone on increasing from day to day, until it had acquired its alarming and incredible magnitude. With the perfect consciousness at last that he was destroying himself, and with every desire to struggle against the insatiable cravings of his diseased appetite, he found it utterly impossible to offer the slightest opposition to them. In vain did he try to resist the baneful temptation. His love for ardent spirits was so strong, his appetite for opium so uncontrollable, that he must still indulge in the use of these insidious poisons which he knew were undermining his system, slowly but surely, and as an inevitable consequence nature yielded to their pernicious influence; an attack of delirium tremens supervened, and death closed his sad career.

THE report of the N. H. Railroad commissioners shows that 90 per cent. of the deaths caused by railroads last year were due to intoxicating liquors. On ten of the twenty-four persons killed were found bottles of liquor, while many of the others bore marks of drinking and were likely intoxicated at the time of death.

DUNGLISON'S DICTIONARY OF MEDICAL SCIENCE. Containing a full explanation of the various subjects and terms of anatomy, physiology, medical chemistry, pharmacy, pharmacology, therapeutics, medicine, hygiene, dietetics, pathology, surgery, ophthalmology, otology, laryngology, dermatology, gynecology, obstetrics, pediatrics, bacteriology, medical jurisprudence, and dentistry, etc. By ROBLEY DUNGLISON, M.D., LL.D., Late Professor of the Institutes of Medicine in the Jefferson Medical College of Philadelphia. New (21st) edition, thoroughly revised and greatly enlarged, with the pronunciation, accentuation, and derivation of the terms. By RICHARD J. DUNGLISON, A.M., M.D. In one imperial octavo volume of 1,191 pages. Cloth, \$7.00; leather, \$8.00. Lea Brothers & Co., Publishers, 706, 708, and 710 Sansom street, Philadelphia.

This work has been before the medical public over forty years, and is yet the standard authority. In this time twenty-one different editions have appeared, and each one has been a larger, more complete work. Thus by the process of evolution and growth it has become the great lexicon of medical science. Some idea of the book is apparent from the fact that forty thousand new terms, tables, and definitions are now published for the first time, and many of the definitions are encyclopedic, giving a concise review of the symptomatology and treatment of many diseases. The correct pronunciation and derivation of all words will be of inestimable value to every medical man. Such a work becomes an essential aid to all practitioners, going beyond the journals and text-books, and constituting the foundation of all accurate knowledge of medicine. The new Dunglison's is fully up to the very front ranks of the present, and is equally valuable and indispensable to-day, as it was in our student days of long ago. Every office and every library should have a new copy of our old friend of long ago. The science of healing has gone on, and the new Dunglison gives permanent record of this advance, matured and perfected by the experience of nearly

half a century. It stands out alone, unrivaled as the great work of every medical library.

THE NATIONAL DISPENSATORY. Containing the natural history, chemistry, pharmacy, actions and uses of medicines, including those recognized in the pharmacopœias of the United States, Great Britain, and Germany, with numerous references to the French codex. By ALFRED STILLÉ, M.D., LL.D., Professor of the Theory and Practice of Medicine in the University of Pennsylvania; JOHN M. MAISCH, Phar.D., Professor of Materia Medica and Botany in the Philadelphia College of Pharmacy, Secretary to the American Pharmaceutical Association; CHARLES CASPARI, JR., Ph.G., Professor of Pharmacy in the College of Pharmacy, Baltimore; and HENRY C. C. MAISCH, Ph.G., Ph.D. New (fifth) edition, thoroughly revised in accordance with the new United States Pharmacopœia (seventh decennial revision). In one magnificent imperial octavo volume of 1,910 pages, with 320 engravings. Cloth, \$7.25; leather, \$8.00. Lea Brothers & Co., Publishers, 706, 708, and 710 Sansom street, Philadelphia.

We take great pleasure in calling attention to this work for its practical value in every medical library. It is not only a guide, but a most reliable work of reference on all questions of drugs and pharmacy. In small hospitals and physicians' offices back from large cities, such a work is of the greatest practical value in preparing medicines and giving facts of their uses not found in other works of materia medica. The special value of this work is in its pharmaceutical and chemical facts, and formulas, with tables, and also records of many of the new synthetic remedies which are attracting so much attention; also tables and tests and methods of analysis. The action of drugs and the treatment of special diseases are presented in a very graphic way. Like a dictionary, it has a permanent value, and is the constant source to which every practical physician

will turn daily for facts and instruction. Such works are libraries in themselves, and working tools of the science of medicine. This Dispensatory has become national in character and popularity, and is heartily recommended by all authorities for its accuracy and completeness.

THOUGHTS ON RELIGION. By GEORGE JOHN ROMANES. Edited by CHARLES GORE, M.A., Canon of Westminster. Chicago: The Open Court Publishing Company. 1895. Pages, 184. Price, \$1.25.

Prof. George John Romanes left some unfinished notes on religion which were handed, at his request, to Mr. Charles Gore, the Canon of Westminster, a friend of the late scientist and a representative of ecclesiastical dogmatism. Mr. Gore decided to publish these notes together with his own editorial comments and two unpublished essays on "The Influence of Science upon Religion," written by Romanes in 1889, and they now lie before us bearing the title "Thoughts on Religion."

The book will create a sensation, for it shows that the late scientist was possessed of an eagerness to believe, but was still unable to overcome the objections made by science. He showed, nevertheless, an increasing tendency toward belief, and we are informed by the editor, Mr. Gore, that Professor Romanes "returned to that full, deliberate communion with the Church of Jesus Christ which he had for so many years been conscientiously compelled to forego."

Whatever opinion we may have, the book is an obvious evidence of the importance of the religious problem. An article on the late Professor Romanes' thoughts on religion, setting forth the lesson which they teach, will appear in the April number of *The Monist* from the pen of its editor, Dr. Paul Carus.

SLEEP AND DREAMS. By DR. F. SCHALZ, Director of the Bremen Insane Asylum, and DR. H. M. JEWETT, of Danvers Insane Asylum. Funk & Wagnalls Company, New York city. 1893.

This little work is a popular scientific dissertation on sleep and dreams, and the analogy of insanity to these phenomena. The causes of sleep are presented in one chapter, and dreams, their meaning and significance, fill up the second part of the work. Sleeplessness and its prevention is one of the best chapters, and describes in a clear way the common-sense rules to overcome insomnia. This very difficult subject is presented in a very clear, graphic way, and the work is an excellent contribution that will be read with interest and satisfaction by all.

The Buffalo Medical Journal has passed the half-century milestone of existence, and is a typical example of the survival of the fittest. With Dr. Potter at the helm, one can safely predict another half century, free from rocks and storms, and replete with strong helpful influences for science and humanity.

The *Voice* has won a commanding place in the temperance world, and its utterances are listened to with careful attention. Send to Funk & Wagnals of New York city for a copy.

The Medico-Legal Society announces a medico-legal congress at New York city in August. A very extensive program embracing many important subjects is announced. A sub-committee on the Legal Responsibility of the Inebriate, under the care of Dr. Crothers as chairman, will present this subject. A very general invitation is given to all persons interested in this topic to send their names to Clark Bell, Esq., Secretary, 57 Broadway, New York city.

No other journal brings a greater variety of clearly written scientific papers regularly to the reader than the *Popular Science Monthly*. The issue for the past few months has contained some excellent papers on mental diseases and psychological studies. It has come to be an essential for every thinking man to keep in touch with this journal.

We find the *Scientific American*, published by Munn & Co. of New York city, a paper that is read thoroughly, and whose coming is watched for with great interest. Its records of the march of science are more fascinating than fiction.

The Homiletic Review tells the story of theologic thought, and the direction of the great themes of the world to come. Funk & Wagnals are the publishers.

Dr. Lyman of the State Insane Asylum at Cleveland, Ohio, writes this in his last report :

"I cannot refrain from saying a word regarding the whisky and opium habits. Here are cases which deserve something more than reprimand and censure. In many cases drunkenness is a real result of real disease or diseased condition. The patient is practically helpless, unless the State, in its beneficence, reaches out and tenderly directs him to a haven of safety. He is like the shipwrecked mariner who has not a single spar to which he may cling. Our good, philanthropic people pass him by and dismiss the subject with the thought. We should have hospitals for the treatment of this class of unfortunates, where the very best medical skill could be procured, and the poor wretch treated for his disease and not trampled upon and ostracized as a willful criminal. Many cases are admitted into and treated in our State hospitals for the insane because there seems to be no other place for them; but it is not right that they should be so placed, nor is it justice to the insane, for whom every spare room is needed. We simply desire to call attention to the fact that so far there has been no disposition on the part of the State to take custodial and curative care of these distressing cases, and we hope that some philanthropist may in our next legislature take the initiative in this commendable work."

Editorial.

DELUSIONAL INEBRIATES.

There is a certain class of men belonging to the middle and upper circles of social and business life, who early in their lives have found that alcohol in small doses produced very pleasant effects. The exhilaration and apparent physical and mental vigor following its use has made a profound impression of its value. Later they use spirits regularly, and claim that it brings a certain nerve rest, and power of adaptability and enjoyment of the surroundings not possible otherwise. Later in their history, the early exhilaration grows shorter, and periods of heaviness ending in stupor and sleep follow. The common depression and reaction from the narcotism of alcohol is not prominent or noticeable, and is never recognized as due to spirits, but is always referred to other causes.

Excesses from the use of spirits are not followed by the common symptoms, but appear in complex neuralgias and so-called rheumatisms, and transient acute inflammations, together with functional disturbances. The mental exaltation turns into egotism and delusions of strength, and power of control. The constant dulling of the senses by the use of alcohol removes all warnings of danger, and increases the delusion of capacity and of power and judgment, and full realization of his condition of mind and body. The value of spirits, and its usefulness in all conditions of life are defended with enthusiasm and vigor. Literally, he has a certain predisposition for the narcotics of alcohols, the effects of which are accumulative and masked. He drinks regularly in moderation, and sometimes to excess, carries on the active duties of life with moderate or average success, and is a warm defender of alcohol, and a bitter critic of in-

ebriates and total abstainers. If he is a brain-worker, his delusions of self-control will grow into suspicions and doubts of others. Delusions of persecution, of intrigue, of dishonesty, and deception and neglect will follow. His former integrity and moral character changes, he is less honest and more unstable in his conceptions of right and wrong. These may be concealed and only known to his intimate associates. Often acute brain disease terminates the case, or some sudden collapse from heart failure, cerebral hemorrhage, or acute inflammations of the lungs or other organs. The muscle-workers of this class always suffer from rheumatism, neuritis, and chronic degenerative neuroses, and are always the first to die in epidemics. Both muscle and brain workers in this class may live the average period of life, and continue the daily use of spirits. But the large majority will die early, and all will suffer from functional and psychical paralysis. Alcohol has obscured and paralyzed the higher brain and sensory activities, and the man has been cut off from normal relationship to the world, and correct knowledge of himself. Such men appear as defenders of the use of alcohol as a leverage. Such men doubt the question of disease, and believe in free will, and full power of control at all times. Such men are always dangerous unsound theorists, and literally paranoid delusional inebriates.

When such cases appear as patients in inebriate asylums their moral paralysis is unmistakable. They are oblivious to reason, sympathy, or any other rational motives or rules of conduct. Nothing but force, fear, and appeals to the lowest impulses have any influence. They are uncertain and reckless of every consideration of normal life and living. The psychical paralysis is strangely blended with intelligence and many misleading traits of character, which are always a source of wonderment. A large class of these cases are only known as moderate drinkers, and their degeneracy and real condition is seldom recognized. When such cases come into places of trust and prominence, or have new duties and new responsibilities put upon them, they manifest weakness and

instability that is not understood. They also display very faulty reason, with childishness or absence of all rational motives, and very low grade of principle. In the future these cases will be studied, and then we shall be able to explain the strange conduct and crime, and unusual acts of men who are only known as moderate drinkers.

OPIUM DELUSIONS.

Recently some very marked examples of delusions in opium cases have been noted in the daily press. A prominent woman telephoned the police station that a murder was committed in the house adjoining, and urged them to come at once. The patrol wagon with officers reached the house in a few moments, and found no one stirring; two servants were working before an open window, and the lady of the house was asleep. The accuser described, with great minuteness of detail, two women fighting, and a man rushing in and stabbing one, then disappearing. This was seen from her window. When told that she was mistaken, she became very angry and positive of her impressions. The two servants working before the open window formed the basis of her delusion. Later it was found that she was using opium daily.

A well-dressed man, with a bruised face and some head wounds, appeared at the police station and gave a minute detail of an assault by a leading merchant, who attempted to kill him. The motive was supposed to be political, to prevent him from securing a nomination the other wished. All the circumstances of meeting, and exchange of blows, and violent language, and his escape by jumping over some rocks near the roadside, were given with graphic exactness. An examination proved that the merchant was in a distant city at the time, and no assault had been committed by any one. The supposed victim was an opium-taker, and had no doubt jumped over a rocky ledge, bruising himself. He was on good terms with the merchant, and never had quarreled in any way.

The following case was submitted to me for examination and opinion. A widow of wealth, culture, and the highest respectability, charged her physician, an eminent man, with committing a criminal assault. The physician was astonished. This lady was supposed to be in excellent health, and had not called on him professionally for years. He was a friend of her husband, and only called at long intervals, and usually on some mission of charity.

The alleged offense was affirmed to have been committed at night, and the lady was so overwhelmed that she remained in bed for two days. A week later she confided to her clergyman, and he called in a lawyer, and a meeting was held. The doctor was emphatic in his denial, and the lady was positive in her convictions. It appeared that the doctor had called that evening, about seven o'clock, and remained a short time. He came to announce the death of a distant relative of the lady in a foreign country, who was traveling with his son. Later the doctor accompanied his wife to the theater, and remained at home all that night. The lady's statement was that the assault was committed late at night, then she changed and said it was early in the evening, and that she was so much confused that the exact time was not clear. The very unusual feature was the apparent unimpeachable integrity of both parties. There had been a feeling of profound respect between them, and no intimacy or familiarity. The physician seldom called except on some errand, and the lady was apparently strong and actively engaged in charity and the management of her property.

In my interview with this lady, there was no appearance of vindictive anger, only deep sorrow, and her statement was clear and natural in all its details. The pupils of the eyes had a suspicious contraction, and she spoke of some neuralgia, for which she had used McMunn's elixir. She acknowledged having used this drug the day of the assault, and in larger quantities for several days after. I found from the druggist that she used large quantities of this drug at different times, although never seemingly stupid from the use of

—: 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 St., New York.