[ENTERED AS SECOND-CLASS MAIL MATTER IN THE HARTFORD POST-OFFICE.]

THE QUARTERLY JOURNAL

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. XVI. OCTOBER, 1894. No. 4.

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

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

Subscription $2.00 Per Year.

TABLE OF CONTENTS.

OCTOBER. 1894.

	Page.
A CONTRIBUTION TO THE MORBID ANATOMY OF SO-CALLED "POLYNEURITIS ALCOHOLICA." DR. A. W. CAMPBELL,	299
OPIUM INEBRIETY. DR. W. F. WAUGH.	319
PRIVATE ASYLUMS AND THEIR DIFFICULTIES DR. T. D. CROTHERS.	326
A CASE OF PARALDEHYDE HABIT DR. F. A ELKINS.	333
THE GROWTH OF PRACTICAL EFFORTS TO FOUND AND CONDUCT INEBRIATE ASYLUMS. DR. ALBERT DAY.	340
ABSTRACTS AND REVIEWS	
NORTHCOTE RETREAT FOR INEBRIATES,	356
INDISCRIMINATE USE OF ALCOHOL AND ITS RELATION TO LIFE INSURANCE,	365
CHRONIC CAFFEISM	367
BEER A CAUSE OF HYPERTHOPHY OF THE HEART	368
STATISTICS ON RELATION OF INEBRIETY TO CRIME	369
EDITORIAL	
PARALYSIS IN INEBRIETY	375
PSYCHIC INEBRIETY,	376
CHARLATANISM—ITS SYMPTOMS,	379
DIMINISHING COAGULABILITY OF THE BLOOD, ETC.	380
THE GOVERNOR'S PARDONING POWER	381
CLOSE OF THE FOURTEENTH VOLUME	383
CLINICAL NOTES AND COMMENTS,	385

THE
QUARTERLY JOURNAL OF INEBRIETY.
Subscription, $2.00 per year.

Vol. XVI. OCTOBER, 1894. No. 4.

A CONTRIBUTION TO THE MORBID ANATOMY OF SO-CALLED "POLYNEURITIS ALCOHOLICA."

By Alfred W. Campbell, M.D.

*Pathologist to the County Asylum, Rainhill.**

Mr. President and Gentlemen — The subject of so-called "polyneuritis alcoholica," which I propose bringing under your notice to-night, is such a well-worn one that I must apologize, before proceeding, for its introduction. A glance at the literature, however, shows that while it is comparatively rich in clinical contributions, a large share of which are of English origin, there is yet much to be derived from the anatomical side of the question; and further, that there exist many well-established clinical features of this interesting disease for which no satisfactory anatomical basis is forthcoming, and which have not yet been thoroughly and completely worked out.

Within the last three or four years the discovery by

* Read at the Pathological Section of the Medical Institution, Liverpool, Feb. 23, 1893.

competent observers of the existence, pathologically, of more or less important changes in the central nervous apparatus, leads one to presume that the disease is one which can be no longer looked upon as one restricted to an affection of the peripheral nerves and the muscles of the extremities; and I, having recently had material and the means for investigation very kindly placed at my disposal by Professor H. Chiari in the Pathological Institute of Prague, have, with his support, been enabled fully to confirm that presumption, and the main object of this paper is to demonstrate my claim to that presumption.

On reviewing the literature from the anatomical side, one finds that Lancereaux in France was the first to give a coherent account of the morbid changes which occur in this disease. He accurately pointed out the parenchymatous nature of the degenerative changes which occur, and observed how the portions of the nerves farthest removed from the nerve-centers were most affected. Lancereaux was followed by Moeli, Strümpell, Dreschfeld, Hadden, Oettinger, Schulz, Oppenheim, Finlay, Déjerme, Siemerling, and Lunz and Mamurowski, all of whom, I would ask you to note, held that the disease was limited to the peripheral nerves and muscles, the spinal cord not being involved in the process.

Opposed to these observers one finds a second series of writers who describe the discovery of changes in the central nervous apparatus as well as in the peripheral parts; of these Eichhorst, Wilkin, Sharkey, Schaffer, Payne, Kojewnikoff, Minkowski, and Pal describe more or less important changes in the cord, while Thomsen, Kojewnikoff, and Hun mention alterations in the cranial centers. The most important of these changes are shortly put as follows:

Eichhorst found a few diseased patches in the mid-dorsal region, disease of the small blood-vessels throughout, and numerous punctiform hœmorrhages.

Wilkin in one case noted leptomeningitis and disease of Goll's columns and of the posterior roots, as well as increase of connective tissue in the lateral column.

Schaffer, Payne, and Sharkey found inflammatory changes and degeneration in some ganglion cells.

The two cases reported by Pal are the most interesting. In one he found degeneration of Lissauer's posterior root zone in the lumbar region, and a striking involvement of Goll's columns throughout the cord; in the other, intense degeneration of Goll's columns in the cervical region, which became less marked lower down the cord, that is, in the dorsal region, but appeared again in the lumbar segments. Lissauer's root zones were also diseased, and in both cases there was disease of the nerve-roots.

As to the changes situated more centrally still than the spinal cord, Thomsen has observed disease of the nuclei of some of the cranial nerves in the pons and medulla oblongata in a case in which abducens paresis, ptosis, and nystagmus were marked clinical features, while Hun and Kojewnikoff have found slight degenerative changes in the ganglion cells of the cortex cerebri.

Before mentioning in closer detail the cases which I investigated, I will shortly run over the main changes I have observed, so far as the medulla spinalis and oblongata are concerned. These are a disseminated degeneration of nerve fibers throughout the white columns of the cord, with a more especial involvement of certain regions,—namely, of Lissauer's posterior root zones, and of the posterior columns, more particularly at their periphery. The existence of scattered degenerated fibers in the pyramidal tracts, as far as they could be followed in the medulla oblongata and pons. Disease of the spinal nerve roots, both anterior and posterior, the latter more than the anterior; this was specially noticed in the lumbar regions.

SHORT DESCRIPTION OF THE CASES.

For the clinical reports of these cases I am indebted to Professors Von Jaksch, Pribram, and Ganghofner, and Dr. Kraus.

CASE I. A man, æt. 51, who had been in the habit of

consuming from 6 to 12 litres of beer daily, with in addition large quantities of whisky and brandy, and who, according to the wife's statement, was always drunk. The usual signs of alcoholic paralysis — motor weakness in the legs and arms, tremors, cramps, sensory anomalies, ataxia, etc., and what is of particular interest, signs of mental aberration in the shape of pronounced loss of memory, and visual and aural hallucinations gradually supervened. The disease progressed ever unfavorably, and a year after the first signs of alcoholic neuritis appeared he died in a condition of extreme emaciation and complete exhaustion and prostration.

Autopsy.— The muscles of the lower extremity below the knee and of the forearms and hand were distinctly atrophied. There were bed-sores on the sacrum, and both trochanters and both knees were red and swollen. The pia arachnoid membrane was universally thickened and cloudy, but easily detachable. The subarachnoid fluid was greatly in excess. The frontal convolutions were markedly atrophied, and the white matter soft. There were extensive tubercular deposits in the lungs.

Microscopical Examinations.— The pons, medulla oblongata, and spinal cord, portions of the median, ulnar, radial, anterior tibial, and sciatic nerves, and of the flexor communis digitorum and anterior tibial muscles were examined microscopically.

(The processes I employed in all my cases were, firstly, the method of Marchi, with osmic acid to stain the myelin, which was undergoing fatty parenchymatous degeneration. The method of Weigert, and sometimes Pal's modification of that method, to bring out healthy medullated nerve sheaths. Alum, cochineal, and sometimes ammonia carmine, as a stain for connective-tissue and axis cylinders, and ordinary hæmatoxylin to demonstrate nuclei.)

The peripheral nerves presented the usual features of parenchymatous degeneration, those which were situated most peripherally being most diseased, while in the muscles many fibers were atrophied, and there was a marked excess

of the nuclei of the sarcolemma. In the medulla spinalis I found scattered degenerated fibers equally distributed throughout the white substance. Both anterior and posterior nerve roots were degenerated to a small extent, the posterior roots showing more degenerated fibers than the anterior.

In the pons and medulla oblongata degenerated fibers could be found scattered throughout the field of the anterior pyramids.

CASE II, Male, æt. 34, admitted to the General Hospital, Prague, September 15, 1891. Death six weeks after admission.

He had been a victim to extreme alcoholic excess for a period of eighteen months, and his illness, which ended fatally after a course of only three months, began with pains in the lower extremities, along with motor weakness and trophic changes in the shape of ecthyma in the same. The nerve trunks were particularly painful on pressure, and electrical examination gave the partial reaction of degeneration so often observed in these cases, and which is probably explained by the existence of some healthy fibers which suffice to conduct the stimulus to parts of the muscles. Signs of neuritis soon followed in the arms. He developed phthisis, and his heart became weak, rapid, and irregular. (I would ask you to note particularly these two points.) Loss of memory, delusions of suspicion, and hallucinations of sight were again a prominent feature, and he died suddenly six weeks after admission to the hospital.

Autopsy.— Body emaciated; commencing bed-sores over both posterior superior iliac spines.

The pia arachnoid slightly thickened and firmly adherent to the cortex, particularly at the vertex; the frontal convolutions slightly atrophied. The lungs presented scattered tubercular nodules. The heart muscle was dark-brown in color, and particularly firm. The appearance of the stomach, liver, and kidneys confirmed the history of alcoholic excess.

Microscopical Examination. — In the medulla oblongata and pons, distributed throughout the anterior pyramids, were found scattered degenerated fibers.

In the spinal cord in the cervical region one found vacuolation of some of the ganglion cells of the anterior cornua. Numerous degenerated fibres in the white substance, but particularly numerous in Lissauer's root zone. The anterior and posterior nerve roots were slightly degenerated, and the pia mater was thickened. Sections from the dorsal, lumbar, and sacral regions presented similar appearances, but we found that the lower one went in the cord the more the posterior columns and the posterior nerve roots became diseased.

Of the peripheral nerves, the pneumogastric, phrenic, median, radial, and anterior tibial of both sides were examined, and all showed a high degree of degeneration, but it was most marked in the anterior tibial nerves, which contained hardly any healthy fibers. In portions of muscles examined there was atrophy of muscle fibers, an increase of muscle nuclei, and degeneration of the terminal motor nerves.

Remarks on Cases I and II. — Both these cases, from the clinical and pathological evidence, were indubitably examples of the disease under consideration. The most important feature which they in common bear, and the feature which I should like most to emphasize, is the presence in the spinal cord and in the motor pyramidal tracts in the medulla oblongata and pons of important degenerative changes.

In the second case, the discovery of disease in the vagi and phrenic nerves is of particular interest. An involvement of the vagus, as first described by Déjerme, and afterwards by Sharkey, will, I think, be found in all advanced cases of this disease, and is undoubtedly accountable for cardiac changes, and probably also for some of the pulmonary tuberculosis which one so frequently sees in these subjects. Disease of the phrenic nerves was in this second

case the probable immediate cause of death, inducing diapragmatic paralysis. With regard to the slight myositis which one almost always finds in these cases, I cannot agree with Siemerling in regarding it, even when exaggerated as the primary affection, nor do I attach much importance to the thickening of the walls of minute blood vessels (those under 0.4 mm. in diameter) which one almost always finds and which Lorenz of Vienna recently drew attention to.

CASE III. This case is of special interest since it occurred in a child (a boy) barely six and a half years old.

The clinical reports relates, that the parents, with the object in view of nourishing a feeble child, had been in the habit, even from its earliest infancy, of literally feeding it on beer and "schnapps."

Two years before admission to the hospital, signs of neuritis, in the form of paresis, and pains in the extremities appeared. On admission the child was weak and thin, had slight œdema of the eyelids and ankles, ascites, and commencing jaundice, due to an enlarged liver and kidney disease, as evidenced by albuminous urine. Mentally he was peculiarly apathetic, and exhibited no interest in his surroundings. The muscles of the leg were particularly weak — the gait so uncertain that he could not walk unsupported, and at the same time of an ataxic nature. The muscles and nerves of the lower limbs showed distinctly diminished excitability to electrical stimulation (most marked in the peronei).

Sensory anæsthesia was present in patches, and the tendon reflexes were very feeble.

Pneumonia, following influenza, was the cause of death.

The autopsy confirmed what has been noted in the clinical report, and need not be given in detail.

Microscopical Examination. — The spinal cord at the level of the third cervical pair of nerves again showed scattered degenerated fibers in the white substance. The anterior and posterior nerve roots were slightly diseased, and a few amyloid bodies were found at the periphery of the sec-

tion. At the level of the sixth cervical pair there were similar changes, but Lissauer's root zones were more diseased. At the level of the third and twelfth dorsal pair the degenerated fibers became more grouped into the columns of Goll, Lissauer's root zones, the lateral cerebellar, and Gower's tracts. In the lumbar and sacral segments there were similar changes, but the posterior roots were more affected.

The median, sciatic, posterior tibial, anterior tibial, glosso-pharyngeal, and phrenic nerves all showed decided parenchymatous changes of the usual nature. The muscles also showed degenerative changes, and in some I found the condition described by Eichhorst (*loc. cit.*) under the name of "neuritis fascians." I do not regard this condition as peculiar to polyneuritis alcoholica.

Remarks.— Now, the autopsy and microscopical examination completely removed all doubts which may have existed during life as to whether this was a true case of alcoholic polyneuritis or not; and though cases of precocious alcoholism have been described (Lyon, Gaston, and Leszynsky), this is, I believe the youngest case on record in which a pathological account of the changes have been given. I would ask you to note again the changes in the spinal cord.

Case IV. This case I will not enter into in detail. The patient, a man, presented clinically the typical features of alcoholic paralysis in an advanced stage, and was suffering from early phthisis.

The examination microscopically of the pons, medulla oblongata, and spinalis demonstrated the existence of distinct changes similar to those found in the other cases, and the degeneration was again most marked in the posterior columns. The nerves and muscles also showed the usual changes.

Summary and Conclusion. — Reviewing shortly these four cases, we find that they can all with justice be placed in the same category as undoubted cases of so-called polyneuritis alcoholica. In all, the peripheral nerves, muscles, and small blood vessels showed typical alterations. All presented

disease of the spinal cord and medulla oblongata, and in all it was of a similar nature, namely, a scattered degeneration in all the white columns, with special involvement of certain strands, namely, the posterior columns of Goll and Burdach, and Lissauer's root zones, and in all the nerve roots were diseased. The degenerated nerve fibers presented the characteristic picture described by Kahler, Leyden, and others, under the name of secondary degeneration. It is difficult to decide which segment of the cord was most affected, but on the whole I think the cervical and lumbar segments contained most degenerated fibres. The widespread disseminated nature of the degeneration is remarkable. In no case were the degenerated fibers confined to tracts in physiological connection, and motor and sensory columns were alike involved. The condition of the nerve roots is also interesting. In the cervical and dorsal regions the anterior and posterior roots on both side were slightly affected, while in the lumbo-sacral segments the posterior roots were more particularly degenerated.

In the case of the cerebral cortex my examination was unfortunately incomplete, as I was not acquainted at the time I made these investigations with the excellent method for examining the brain in the fresh state, originated by Dr. Bevan Lewis, and which I now adopt in the examination of brains of the insane; but that serious changes do occur in the cerebrum I have no doubt. My presumption is borne out by the existence of microscopic alterations in the shape of thickening and cloudiness of the membranes and cortical atrophy, and by the existence clinically of well-marked and constant signs of mental disease. I refer to the irritability, loss of memory, the apathy, and the delusions and hallucinations which were reported as having been present in some of my cases, and concerning which Tilling and Korsakow have written excellent monographs. The changes to be demonstrated in the cortex cerebri will probably resemble those found in cases of chronic alcoholic insanity.

Next, I would like to mention, as a not unlikely hypothesis, that the ataxy so often met with in these cases (which lead Strümpell to name the disease pseudotabes alcoholica), as well as the atonic condition of bladder and intestine sometimes seen, are possibly referable to such changes in the spinal cord as I have described.

Taking, therefore, the clinical facts, and coupling them with the various morbid changes which I was able to demonstrate in all my cases and those which others have recorded, I think that you will agree with me in maintaining that polyneuritis alcoholica, so-called, can no longer be regarded as a disease confined to the peripheral parts of the nervous system — in other words, that in this disease the toxic pathogenetic action of alcohol operates upon the entire nervous system.

Bearing these facts in view, it immediately occurs to one how incorrect the title "alcoholic polyneuritis" is, since, apart from the fact that the process in the nerves is, in no sense of the word, an intestinal neuritis, but a pure parenchymatous degeneration, it is, further, by no means limited to the nerves, but is also, as I have shown, to be demonstrated in the spinal cord, pons, and medulla oblongata, and almost certainly in the cerebrum also.

Next the question arises, Whether do the pathological changes found in the different parts of the nervous system develop independently of one another or not? I am inclined, with Kojewnikoff, to think that the morbid changes in different parts of the nervous system are quite independent of one another, and that alcohol, so to speak, attacks all parts of the nervous system, more or less, simultaneously.

Having now offered my observations, it remains for others to confirm them, and so prove that the changes in the cord which I have described are of constant occurrence; and when this is satisfactorily proved, it will be an encouragement to seek in other parts of the nervous system for degenerative changes. I feel certain that, by the employment of the new and excellent methods at our disposal, —

I refer particularly to that introduced by Marchi, — such changes will at any rate be demonstrable in the spinal cord; and I hope that my communication may act as a guide to any investigators in that direction.

INEBRIATES' CONDITION. — Dr. Paul Paguin in a recent address before the Missouri State Medical Society, on the Responsibility of Criminals, remarked as follows: "The theory that a drunkard has arrived at his condition willfully is not always true; alcoholism is often, at certain stages at least, a real disease, and when the basis for, or the tendency to it, is inherited, there is no doubt about it being a pathological entity, at a very early stage, if not always. Consequently, the unfortunate who suffers from it is more to be pitied than condemned. At certain stages and in certain conditions, the irresponsibility of the alcoholic, irrespective of the origin of the condition, is as positive as that of the man crazed by fever. I make this statement of the facts with regret; I am forced to do it because it is true. And let me say here, that I do not wish to be understood as being a defender of the crimes of the inebriates, or even of being in the slightest degree desirous of condoning the inebriate. I simply desire to mention the scientific grounds for the existence of the condition."

Gov. Winthrop of Massachusetts drafted a bill which passed the legislature of 1639, which reads as follows: "Forasmuch as it is evident to this court that the common custom of drinking one to another is a mere useless ceremony, etc.,

"It is therefore ordered that no person shall, directly or indirectly, by any color or circumstances, drink to any other, contrary to the intent of this order, upon pain of 14 pence to be forfeited for every offense, etc."

OPIUM INEBRIETY.

By W. F. Waugh, M.D.,

Professor Clinical Medicine, Post Graduate College, Chicago, Ill.

The opium habit, long prevalent in Asia, was rarely known in Christendom until within recent times. It is becoming of increasing frequency. The reasons for this are to be found in the conditions of modern life, and consist of the causative factors of suicide and insanity. As the demands on the human intellect increase, as the struggle for existence grows sterner, the minds that give way under the strain or seek assistance from outside sources must necessarily increase. It is the price we pay for our modern civilization — one example of the law of compensations.

An enormous impetus has been given to the use of morphine by the introduction of the hypodermic syringe. He has much to answer for who teaches his patient the use of this instrument. When the charms of morphine have been once experienced, it is easy to find an excuse for a repetition of the dose. A doctor who first took opium for diarrhea, used to take a cathartic at night to give him an excuse for a dose of opium in the morning. Behind such paltry refuges of lies will poor human nature seek to hide its weakness!

It is certain that all persons are not equally liable to become morphine habitués. To many the effects of the drug are disagreeable; to others, singularly attractive. Conditions predisposing to narcomania are: the nervous temperament, hysteria, neurasthenia, uterine pain, neuropathy, with pains, as in ataxia, neuralgia, etc. Above all, is the production of euphoria: when this has been experienced, morphine should never again be given that person. Narcotics are also taken to drown remorse or despair; to enable the user to accom-

plish tasks otherwise beyond his power ; to banish care; from idleness, vice, morbid curiosity. bad example; to increase the sexual vigor or the conversational powers. The greatest number is said to be supplied by those who handle drugs — physicians, druggists, nurses, students, and their relatives. This, however, may be due to the fact that these classes supply the larger part of those who apply for cure, as the statistics are based on the reports of sanatoria. It may be that these classes, conscious of their danger, are more likely than others to seek to escape.

The habitual takers of narcotics may be divided into several classes. Regnier classifies them as justifiable consumers and morphinomaniacs. The first group comprises those who are subject to incurable disease — cancer, tuberculosis, etc., who employ morphine solely to render conscious existence endurable. Morphinomaniacs are they who take the drug to secure the pleasurable sensation denominated euphoria. A large number in this class claim to be in the former, as they first took the drug to relieve the pangs of disease that has since passed off — or rheumatism, as that is not, as they claim, incurable. Sometimes narcotics are taken to ward off attacks of periodic dipsomania, or to replace the habitual use of alcohol.

All these are to be distinguished from those whose feebleness impels them to seek in morphine a shelter from all unpleasant sensations, and from the rude jars of a hurrying, struggling world ; still more from those in whom morphinism is but one expression of a defective organization, inherited from a neurotic ancestry. This disease we should denominate the narcotic habit, rather than morphinomania, for chloral, cocaine, chloroform, and alcohol habitués interchange their drugs readily — representing simply varieties of a single neuro-psychic malady — narcomania. The dipsomaniac, "cured" by some secret process, returns to his home quite comfortable with the morphine habit; while the morphinomaniac rids himself of this drug by substituting codeine, chloral, cocaine, or cannabis indica. The

real disease remains uncured — the dependence upon narcotics. Those who employ morphine from necessity may long continue to obtain relief from the ordinary medicinal dose, but morphinomaniacs push the doses up as rapidly as they are able, the tolerance increasing with the rise. Regnier believes that this is because larger doses are required for the production of euphoria, but I think this is a mistake. Every patient I have questioned has acknowledged that he increased the dose because he wanted *more* of the pleasure. Indeed, there is sometimes a remarkable sensitiveness to the action of morphine in habitués, and I have produced euphoria with $\frac{1}{64}$ grain, in a man who had been taking 15 grains daily only ten days before.

Regnier pictures the genesis of morphinomania, as follows: Take a hysteric, to whom morphine has been given to arrest the paroxysm. The sense of calm is accompanied by a comfortable consciousness of well being, of peculiar super-activity. She is alert, her memory quick, her wit keen. Tasks previously fatiguing become easy. Good humor pervades her, the cares are forgotten, she is optimistic, her face is rosier, the eyes bright, the pulse and respiration stronger. But when the morphine is discontinued she finds herself possessed by a strange malaise, oppression, inquietude, even anguish. The mind is dull, sluggish, weighed down by a sense of powerlessness. Yawns, coughing fits, irritate her; icy sweats appear, with palpitations. The pulse may become very feeble, and she languishes, incapable of exertion, pale and meager, or red and cyanotic, assailed by pains over the whole body, chilled, trembling, knowing not to what to attribute her malady, and anxious as to its outcome. Let her then have an opiate, and like magic the symptoms disappear, and warmth and gayety pervade her being. Every pang is gone, and health, strength, imagination, power to work, return on the instant. But sooner than at first, this magic state passes away, and the malaise returns more pronounced, more accentuated than before. But now she comprehends the true nature of the malady, she recog-

nizes the imperious need for morphine, and after a brief resistance she demands the drug. This sense of need, intense, imperious, irresistible, constitutes morphinomania. From this day her life is divided into two periods, distinctly alternated — the state of euphoria from morphine, the state of need when the effects of the dose are spent, the former lessening its duration unless the doses are increased in size or in frequency. Insomnia furnishes another excuse for increasing the daily dose, and in time every excuse is seized upon for augmenting it. As this is done, the symptoms of intoxication ensue, and these may frighten the victim into moderation; but the reappearance of that dreadful *need* drives her back to it. If she be resolute enough to attempt a stoppage, the frightful suffering and the terrifying symptoms arising force the patient back to the drug, and only result in inspiring her with such a dread of discontinuing it that she can hardly be persuaded to resort to legitimate treatment.

Sometimes, if the habit has not had time to rivet its hold, the victim may break his bonds, but generally he fails. Some who succeed remain free for months, when some emergency arises for which opium is taken, and a single dose is enough for that dreadful *need* to reappear in all its force, and in a very short time the habit is re-established, and the second stage of the malady opens. Euphoria cannot be maintained even by thirty or more injections daily. The pupils are unequal, the pulse small, filiform, or tense and intermittent. Palpitations are common. Slight exertion causes panting and sweating. Cramps, pains, nocturnal gastric crises appear and increase in severity. Profuse sweats occur without apparent cause. Terrors afflict the patient, quaking at the least noise or at hallucinations. Insomnia alternates with frightful nightmares, so that the invalid takes to late reading. When, worn out completely, she closes her eyes, clonic convulsions awaken the wretch. After several such shocks she falls asleep, but the slumber is unrefreshing, and in a few hours she awakes, wretched, incapable of exertion,

until an injection has restored the power. She becomes indifferent to all but the satisfaction of the need for morphine, neglecting every duty. Extreme irresolution and cowardice characterize the habitué. Everything unpleasant is avoided, the least pain exaggerated. Emaciation becomes marked, the wrinkled skin hanging loosely over the projecting bones. The appetite is lost, though spells of ravenous hunger occur. Constipation alternates with diarrhea. The menses cease; in men, the sexual power is lost; the mind weakens, memory fails, judgment becomes imbecile, and a sluggish indifference comes on, resembling paretic dementia, though never so complete. The moral sense is weakened, and a tendency to lying arises. No credence whatever is to be given a confirmed morphinomaniac, especially as regards their habit, and the reduction they are making in the dose. Much ingenuity is manifested by them in secreting the drug and syringe. They have been found in the hollow leg of a chair, in the lining of clothes, and snugly hidden away in the hair, or in the vagina. No matter what has been the previous life, they will not hesitate to resort to robbery, prostitution, or murder to obtain the drug. Melancholy gradually settles down upon the victim, who bitterly regrets his infatuation, so that suicide is often the end. If he is to be cured, he must be placed beyond all possibility of obtaining the drug, and kept in restraint as long as the sense of *need* is felt. The tendon reflexes of the knee are abolished; the nutrition has experienced a profound impression; the teeth and hair fall, and he looks prematurely aged. Nevertheless, even yet he may be rescued, at the price of suffering, by skillful management. If not, or if he quickly relapses, we see the symptoms of the final stage. Here there is no more euphoria, no matter how large the dose taken. The cachexia advances, the emaciation reaching a point shown in no other malady. The skin and mucosa are cyanotic, dropsy supervenes, with breathlessness on the least exertion; complete anorexia, fetid breath, hallucinations, delirium in the form of lypemania, and finally complete dementia or brutishness, ending in terminal maras-

mus. In this period there is an increase of cardiac dullness, weakness of the apex beat, with extreme smallness and irregularity of the pulse. The heart sounds are feeble, but usually normal. The urine is scanty, and often albuminous.

He is then hopelessly lost. The changes in the nervous system, heart and kidneys, are such that there is more danger for the patient in suppressing the morphine than in continuing it. We can only diminish it slightly, to prevent the intoxication making such rapid progress, and postpone as long as possible the fatal end. But death is inevitable, and not far off.

In the earlier stages few and trifling lesions of the nervous system have been found. It is at all times difficult to tell what is due to the morphine and what to intercurrent or pre-existent disease. Hyperemia of the brain, lungs, liver, kidneys, and bowels have been described, with apoplexies, ecchymoses, etc. Cerebral anemia is usually present. The lymphatic glands have been found inflamed, or suppurating; the heart muscle pale and sclerosed (Lewinstein), or hypertrophied; twice it was fatty (Hirschfeld). The cells of the spinal cord present tissue faction, vacuolation, and granular degeneration.

When the drug has been discontinued the tissues gradually resume their normal function; rapidly and fully if the habit be of short duration, slowly and imperfectly as it has continued longer. The nerves resume their functions almost violently, and when relieved of the long-continued benumbing influence of the drug, they become hyperesthetic, their abnormal sensitiveness causing acute distress. The same reaction is often noted in relation to other vital functions. As the symptoms of dementia supervene, with obliteration of the moral sense, the chances of complete recovery are lessened. Patients who have been treated by the Keeley people are especially difficult to handle, as they seem to be often devoid of shame, and to look on themselves as irresponsible freaks of the most interesting description. Prolonged restraint, for at least a year after the cure, is fre-

quently required to render it permanent in such cases. But even if the case be far advanced, a permanent cure may be obtained, provided the patient's means permit him a period of rest or light occupation, and a sufficient motive exists to keep him from falling back. The possessor of a wife and children is a more hopeful case than the bachelor, especially if the latter be supported by a mother, and not trained to support himself. It is astonishing that men of brains, of talent, or even genius, so frequently fall under the morphine thralldom. In the majority of cases, some true chord will be found to vibrate in harmony with duty. Depravity is rarely so complete, self-indulgent imbecility so deeply seated, but that motives may be found that will arouse the latent spark of manhood and induce the patient to make an effort to break his chains, if properly helped.

The efforts at cure and other incidents may delay the course of the disease; but apart from these its duration is variable. Some run quickly through the stages, while in others the progress is slow. Death is often due to intercurrent disease, the opium habitué being peculiarly liable to die of epidemics, cholera, typhoid, etc. Surgical operations result badly with them, and tuberculosis is especially frequent. Death is frequently due to an over-dose, taken from chagrin or with suicidal intent.

A frequent cause of relapse into the habit is the recurrence of that imperative sense of need, of which we have spoken. During the first year after the cure, this may appear at any time, when the patient suffers from any cause of depression. The larger the amount consumed and the longer the habit has lasted, the more likely is the patient to relapse. Neuropathics and those who handle drugs are also most likely to relapse. The prognosis is always best when the cure has endured a year or more; worse when there have been relapses previously, and bad with old men, alcoholics, and the tuberculous. There is scarcely a hope of cure if the patient continues to use alcohol, ether, or naphthol as intoxicants, or cocaine. Even when a cure has been effected in

ases far advanced, the patient is not necessarily free from langer.

Some remain well for months, and are then seized with palpitations, syncopes, anguishes, sadness, and nervous accidents; they fall into a cachexia that soon proves fatal if morphine be not given. The system is no longer able to do without the drug, which, however, must be controlled by the physician.

When the morphine is suddenly cut off, then occur certain symptoms to which Lewinstein has given the name of abstinence phenomena. First of these is that described as the sense of *need*. It is rather due to the fear of suffering than the wish for euphoria. It is never wanting; showing itself more and more tenacious, imperious, irresistible, until the victim throws off all pretense and boldly affirms the impossibility of enduring life without morphine. If deprived of morphine, the malaise and agitation increase, the patient becomes irritable, quarrelsome, critical, injures his surroundings, breaks objects within his reach. By turns he rages and begs with tears for an injection. Later, his agitation becomes extreme; he cannot be kept quiet, but deafens his neighbors by his groans and cries. There may be even furious delirium, clonic convulsions, or ataxic tremblings. Hallucinations of sight and hearing may occur. Following this comes a stage of depression; they remain gloomy, taciturn, plunged in despair, often of suicidal character. Reflex excitability is exalted, as shown by yawning, sneezing, little fits of coughing, spasm, or trembling of the legs. The pupils are often unequal between the second and eighth days, the dilatation sometimes alternating, and the retina is photophobic. Besides these we have the pain phenomena — neuralgias, migraine oppressions, palpitations, pain on swallowing. Two important phenomena now present are the impulses to suicide and to theft or murder.

When the patient wants morphine there is no crime from which he will hesitate to procure it.

If the drug be abruptly stopped, the symptoms last three

or four days ; but if the method of very gradual reduction be pursued, they last so much the longer. If a dose, however small, of morphine be given, the abstinence symptoms disappear promptly, but recur in time corresponding to the size of the dose. Choleraic diarrhea, collapse, with great vital depression, somnolence, coldness, difficulty of speech, convulsions, or tremors, may occur repeatedly, ending in death or recovery. If the latter the symptoms gradually subside, the mind resumes its sway, and the appetite returns. As the patient begins to put on fat, the sexual organs resume their vigor, often in an abnormal degree. Men may suffer from priapism and testicular neuralgia, relieved by emissions, and women may display erotomania. These soon subside ; and in from two to six weeks the patient is free from all unpleasant sensations. At various periods, however, according to the conditions of life, the sense of need may recur. The critical time is the seventh month, when a melancholic period often occurs, and the danger of relapse is great.

If a year has elapsed without recurrence, the prognosis is good, but the drug must never be tasted again.

The treatment has for its object the discontinuance of the habit and the prevention of its resumption. Lewinstein stops the drug abruptly, confines his patient to a padded room with a sufficient force of nurses to prevent self-injury. This is only suited to those who have used the drug a short time and in small doses, when the strength is not seriously impaired. The suffering is extreme, delirium often supervening, with acute symptoms of withdrawal. But for this very reason the chances of permanent cure are better, as the suffering makes a lasting impression on the patient, who thus realizes the prowess of the deadly enemy from whose hands he has escaped. The greater the suffering, the less likely is the sufferer to again put himself in the clutches of this demon.

The second method may be termed the amateur's : that of imperceptible reduction. This is objectionable from many points. When the reduction has proceeded to a certain

point the suffering begins and continues until it has been completed. If a half-grain be necessary to relieve, this dose cannot be reduced with the patient's consent; and no more suffering will follow the total discontinuance than if the dose be reduced; so that the slow reduction only prolongs the agony. In advanced cases, however, the reduction can only be made in this way; and if the strength be seriously impaired it is necessary to reduce the dose as much as possible and then wait till the strength has been restored by suitable means before total withdrawal is effected.

In most cases, Erlenmeyer's method of rapid reduction is best. The dose is reduced one-half each day, so that it is totally withdrawn in from four to ten days. The suffering is not so severe as in Lewinstein's cases, and may be graduated to the patient's powers of endurance.

The substitution methods are only to be condemned. Alcohol, chloral, codeine, cocaine, and cannabis are alike objectionable in themselves, and they leave the disease uncured. After using them a variable time the patient invariably returns to morphine. While any of these drugs will lessen the pain of abstinence, they give no real relief, as the pains recur with the same intensity when the effect of the dose wears off. They simply postpone the inevitable conflict, when the patient must assert his manhood, meet and conquer his enemy, or the cure will be transient and illusory.

Whatever plan be adopted, the essential part of the treatment consists in obtaining perfect control over the patient. Many men think they want to be cured, but they don't. Unless they show the sincerity of their desire for escape, by leaving their homes and devoting themselves exclusively to the work of a cure, it is not worth while to attempt it. They will reduce the dose till real suffering begins, and then they will find some excuse for discontinuing treatment, or else they will lie about it. Besides this, the patient should pay enough for treatment to make him feel that he ought to get the value of his money, and thus his co-operation is secured.

During the reduction period the patient should be fed

well, on easily digested and nutritious food. During the period of suffering but little will be taken and I rely then upon the raw white of egg in water, junket hot soup, and especially bovinine. Most of my cases live on bovinine, a teaspoonful or more every hour. During this time, I am sure that it not only keeps up the strength, but shortens the suffering. I give all of it the patient can be induced to take, and if the stomach rebels, it is given by the rectum.

Until the crisis is past, the patient is encouraged to keep to his bed, only rising when the nervousness is relieved by walking about the room, or to take a bath. Not for a moment is he left alone, a competent nurse being in the room constantly, and the doctor within call.

At the beginning of treatment every patient is placed on the use of an alkaline water, containing potassium bromide, carbonate, and acetate, the proportions varying with the case. The urine is kept slightly alkaline, the kidneys active, and the nerves sedated, by the three salts named. The bowels are cleared out by cathartics, and the result of this is sometimes surprising to the patient, as well as to his attendants.

These preliminaries being attended to, the physician's duty is to watch the reduction, and note whether the symptoms are due only to it or to underlying disease uncovered by the removal of the morphine. All emergencies arising must be treated without opium, this drug being blotted out of the patient's materia medica for all time to come. Weakness of the heart demands the liberal use of sparteine; neuralgia requires heat and the anti-nervine powders (acetanilide, ammonium bromide, and sodium salicylate). Nausea or diarrhea are the best treated by the oxides of zinc and silver, bismuth, and oxalate of cerium. Aching of the bones and muscles, particularly of the knees, is greatly relieved by the salicylates, and by hot or cold water. Faradism and the galvanic current are also of value in some cases, to relieve the pains until the probationary period is past. To reduce the severity of withdrawal symptoms the hot bath is of the utmost value. The hotter the water, the greater is the relief.

The patient may spend hours in the tub if he so desires, and return to it whenever he pleases. Hypodermics of water, hot or cold, or of chloroform water, as near the seats of pain as possible, often give relief, but should only be used with the patient's knowledge, as deceit, once detected, ruins the physician's influence. Excessive doses of bromides cause a very offensive breath and injure the digestion. Hydrobromic acid sometimes answers a good purpose, in doses up to half an ounce. For insomnia, some do well on trional, while others sleep better on sulfonal. The large doses sometimes fail when moderate doses succeed.

The secret of success is sedation. The nerves, released from the paralyzing effects of morphine, react sometimes with violence. Hyperesthesia is the rule, and little bumps give rise to complaints of pain, that are not altogether imaginary or assumed for a purpose. The special senses are acutely sensitive. I have given antimony, aconite, veratrum, and apomorphine with advantage. But the drug that best replaces morphine is eserine, or physostigmine salicylate. This contracts the pupil, acts as a sedative, but is a tonic to the muscular fibers of the intestinal canal, and to the heart. It was for these reasons that I first administered it to a morphine case, and unexpectedly found that *it produces the sense of comfort, euphoria fully equal or even superior to that of morphine*

This alkaloid is derived from the physostigma venenosum, the ordeal bean of Calabar. Physostigmine depresses the motor functions of the spinal cord, in large doses depressing the motor nerve ends also, and even the sensory. It stimulates involuntary muscular fiber, increasing the peristaltic action of the bowels, and raising the arterial tension, while slowing the pulse. It contracts the pupil and decreases intraocular tension. When the morphine had been reduced in one of my cases to $\frac{1}{8}$ gr. per day, the symptoms presented were, Abnormal irritability of the brain and cord, hyperesthesia, motor restlessness, weakness of the pulse, giving the sensation of half-filed arteries, mobile pupils, tending to

dilate, lack of tone to the stomach and bowels, and the bladder as well. This condition seemed to indicate the use of physostigmine, and I gave $\frac{1}{100}$ grain hypodermically. Not only did it relieve the condition present, but it produced euphoria, the patient insisting that I had given him morphine in a larger dose than at the preceding injection. This result has followed every dose of the drug I have since given. The relief is complete for the time being. It does not last as long as that of morphine. I am not able as yet to say how often it should be given, or to what extent the dose may be increased, because in every case thus far treated by me the patient has been able in a few days to throw off the habit, and do without either morphine or the substitute.

From the time the victory is won I employ every effort to confirm in my patients the moral force. The pride of manhood in its strength is aroused by gymnastic exercises, feats of strength and field sports, whenever possible. The moral force is strengthened by urging the man to face unpleasant things. Morphinomaniacs are luxury-loving weaklings, physical cowards, moral shirks. I will make them plunge into a tub of ice-cold water, and when they learn to do this, and to enjoy the shock as they do in a few days, I feel sure of the cure. A man cannot help respecting himself better when he marches into the cold tub resolutely, when he has never before in his life done such a thing. The first letter received when my patients return to their homes is pretty sure to tell of the tank being put up.

When the morphine has been wholly withheld for twenty-four to thirty hours, in those deeply sunk under its influence, the suffering may be severe. I then give one dose of morphine, $\frac{1}{3}$ to $\frac{1}{4}$ grain; the patient has a good sleep, and awakes free. In milder cases this sleep comes without morphine; but in all, when the marked abstinence symptoms have endured for forty-eight hours, the crisis is past and the battle won. A return of the symptoms is then only likely after exposure to cold or wet, or to work, the likelihood to such return decreasing rapidly.

The after-treatment consists in such measures as are required by each case. Every underlying disease is studied and treated on the best systems. Nerve degeneration and the neurotic condition require massage, electricity, systematic feeding, inunctions of oils, carefully graduated exercises, and the use of the drugs we have learned to classify as nerve foods — phosphorus, arsenic, quinine, iron, and strychnine. Fellows' syrup and hydroleine are preparations I am never without, and give to every case during convalescence.

There is not much need of appetizers ; during the four weeks' reconstruction they have a ravenous appetite, and get fat. Pepsin and malt extract are employed at first, with hydrochloric acid, until the digestive power catches up with the demand.

I have said that unless a man wants to be cured there is little use in making the attempt. Sometimes a patient comes at the solicitation of relatives — a broken-hearted mother, perhaps. He goes through the course, is completely relieved of his habit, put in excellent physical condition, and immediately goes back to the morphine ; not because he has any reason, or even excuse, but because his moral nature is completely depraved by the habit. He is no longer *compos mentis*, and the only hope is in a prolonged confinement in an insane asylum. By years of abstinence, with suitable reconstructive treatment, the degeneration of nerve tissue may be stayed, and a fair recovery made, enabling him to resume his place in society. Without this he is doomed. He is as surely insane as any maniac.

There are numerous devices by which the suffering can be reduced, so that I have repeatedly been told by my patients that they had not experienced anything meriting the name of pain. The greatest suffering is due to the apprehension of death, and this requires the quiet assurance of the trusted physician. As treated at a sanitarium, the severer withdrawal symptoms are over in twenty-four hours ; and when a patient has been that long without the drug he is past the crisis, and commences to pluck up courage. It is

the rule then for him to urge that he be given no more morphine — that he will take no more, let the consequences be what they may; and this is perfectly sincere. From this time on the feeling of rejuvenation, as the currents of life begin to flow once more in their old channels, imparts a delightful sense of returning vigor, of freedom, youthful buoyancy, resembling the sensations of one released from long imprisonment. In the whole range of medical practice I have found nothing so fascinating as this releasing of the body from bondage, rescuing the soul from perdition.

EFFECT OF INTOXICATION ON TESTAMENTARY CAPACITY. — A man may habitually indulge in intoxicants, and yet possess testamentary capacity, the Prerogative Court of New Jersey holds, in the case of Fluck *vs.* Rea, if at the very time of the execution of the will he is able, and does, clearly comprehend the nature and effect of the business in which he is engaged. The rule in such cases is there quoted from Chief Justice Denio of New York, and is in this language: "It is not the law that a dissipated man cannot make a contract or execute a will, nor that one who is in the habit of excessive indulgence in strong drink must be wholly free from its influence when performing such acts. If fixed mental disease has supervened upon intemperate habits, the man is incompetent, and irresponsible for his acts. If he is so excited by present intoxication as not to be master of himself, his legal acts are void, though he may be responsible for his crime." — *Med. News.*

THE General Council of the Seine has decided to erect a large insane asylum at Ville-Evrard, in which there will be provision for the reception and treatment of male inebriates. The wing for this purpose will accommodate five hundred patients. This will be the first institution of the kind in France.

PRIVATE ASYLUMS AND THEIR DIFFICULTIES.*

By T. D. Crothers, M.D.,

Superintendent Walnut Lodge Hospital, Hartford, Conn.

It is evident that private asylums for inebriates in this country are not only misunderstood by the profession, but are regarded by the public as mere commercial ventures, with the central purpose of pecuniary gain to its managers. This is unjust to the few leaders who are spending all their life energies in studying the inebriate and trying to make the facts of his history understood by the profession. Private inebriate asylums for the purpose of making money are always failures; even when managed as mere boarding-houses, they sooner or later change and merge into some other business.

The first public asylum at Binghamton, New York, pointed out certain general principles which have been landmarks for all students of this subject up to this time. One of these central facts is that all inebriates are neurotics and degenerates, either by inheritance or acquisition, who live on the border-lands of sanity and insanity, and alternately cross and recross these frontiers. Asylums that will provide for these varying conditions must have alternate restraint and liberty, they must have surroundings and means to both build up the sane and insane; to treat conditions of neurasthenia, hysteria, nervous instability and irritation, with all the complex emotional, nutrient, and mental disturbances. Obviously, the personality of the managers and the special surroundings of the asylum will be very prominent as factors in the treatment.

*Read at the annual meeting of the Association for the Study and Cure of Inebriates.

The *public* expect asylums to exercise full state prison restraint, with absolute impossibility of procuring spirits, and in a brief time, by the means of medicines, to restore the victim to full health, and destroy all possibility of using spirits again. Failure to do this is assumed to be the fault of the management. The public suppose every private asylum is governed by self-interest and can be purchased, and thus wrongs may be committed and concealed. They seldom realize that self-interest demands that each case should be studied and every possible means applied for permanent recovery; that every asylum is judged by its fruits; that its success depends on the successful treatment, not on its income; that injustice and wrongs are suicidal to the asylum and cannot be concealed in the suspicious search-light of public criticism. The success and life of a private asylum depends on its merits and honesty, as well as capability to do the work it attempts. Private asylums all suffer from want of authority to legally *restrain cases*. The public demand that such cases should be fully restrained and refuse to pass laws giving the power of control. Most asylums have some law which enables them to restrain the inebriate when intoxicated, or by contract when admitted hold over him some power of control. But should the patient escape, and resist efforts to return to the asylum, coercion would invite legal action by critical lawyers, making expense and trouble. Violation of rules and insubordination are punished by restraint, and special nurses must be relied upon more than external appliances. In most cases the actual restraint is exercised at intervals, and directed to meet the special wants of each one. This will depend on judgment of the manager and his knowledge of the case. The more accurately he is acquainted with each person, the easier the control and management. Hence the most incessant watchfulness and personal care are required. In a public asylum the patient expects to be considered one of many and follow some general rules, but in a private asylum he assumes the air of a guest, and because he pays demands

obsequious care and attention, and assumes that he can dictate in many things as a mere business. On admission he is always humiliated by the disgrace of coming; and claims that he has lost character by this act more than all his drinking, and is very penitent. He at first finds the asylum and its management very perfect, and praises everything; shows great anxiety and confidence in his complete recovery; spends much time in describing his own case and the depths of misery reached, and the narrow escapes, and warns others earnestly. He unites with the management in every rule and follows all advice most implicitly, and never tires in praising all the means used. He takes pains to write to all his friends of his recovery, and introduces the subject to strangers and extols the grand work of the asylum. After a few weeks this period is followed by reaction. He is disgusted to find that his confidence in his great strength is not shared in by his friends and the asylum management. Objection is made to his coming and going at will, to his going home and entering upon business relations, as if in perfect health. Then he finds the asylum to be a bad place and its management to be dishonest. A period of suspicion, intrigue, and low cunning follows. During this time he finds the physician ignorant, incapable, and other patients drinking in secret, and writes to his friends of being intoxicated, and of spirits at the command of anyone with money. The food, sleeping-rooms, surroundings, physician, and attendants, are all the worst possible. This period frequently ends in a drink paroxysm, followed by the same penitence, humility, and extravagant praise. Where it does not end this way it developes more serious plotting and malicious slanders and obstructive efforts to create sympathy with friends and be removed. He will become more secretive, but try all means to show the dangerous character of the asylum, and his great strength in being sober in such conditions of temptation. He will assist to procure spirits for others to drink, write anonymous letters to friends, and in every way seek to injure the work

and its management. He has the delusion that his friends are deceived by the physician, who has no other motive than gain to keep him. Sooner or later all endurance ends and the case is expelled or urged to go away. Often these cases relapse at the asylum, and while pretending to abstain, are continually plotting to procure spirits, and blaming the management for their success, complaining bitterly when restained, and taking advantage of every opportunity with the slightest liberty to embarrass the management and obtain spirits. These periods of irritative insanity vary widely. In one case it is delusions of persecution from friends and infidelity of his wife. In another it is delusions of property and injustice, with fear of poverty, almshouses, and insane asylums. In another it is character and standing that is wrecked by his residence in asylums. The common delusion of the bad management and dangerous character of the asylum is not unfrequently supplemented by efforts to make it real by bringing in spirits and circulating slanderous reports. The insanity of these cases is very marked, particularly in the realm of the psychical. The delusions and illusions, the credulity and skepticism, the uncertainty and instability of the brain centers, the intense selfishness, and clouded, perverted judgment ; also the dominance of morbid ideas and functional impulses, together with a marked paralysis of the higher centers of consciousness and conception of right and wrong, duty and obligation, are all symptoms common to most cases. The physical degeneration is equally marked and complex. The nutrient functional and organic derangements exist in all cases. Exhaustion, anæmia, and general degeneration are also present. Many of these cases are naturally possessed of considerable intellect that may approach genius, and is often associated with mental activity that remains even when the vigor of the brain is lessened. A partial disturbance of the integrity of the brain is far more dangerous because concealed; hence the inebriate is not understood and his malady is unrecognized except from close study. While such patients are the

most difficult of all others to manage and treat, the relatives come in for considerable vexation and annoyance to every private asylum. The first enthusiasm of the patient is often shared in by his friends, and confidence and expectation reaches a high point, even among many sensible persons. By and by reaction follows. The patient relapses in the asylum, or writes that spirits are free and he can get all he wishes. Then come statements of the dishonesty and wrongs of the management, anonymous letters and circumstances that are construed into evidence against the asylum. Their vigorous letters to the physician for some explanation brings to them unsatisfactory answers of the unsoundness and unreliability of the patient. This they receive with doubts, and encourage the complaints of the victim.

Some years ago the famous Dr. Bucknil, while visiting Binghamton asylum, was told by a patient that he could give him his choice of several different kinds of spirits, and that many patients had a stock of private spirits in their rooms. He believed this and defended it in print, simply on the word of the patient. The slightest acquaintance would have revealed the fact that no one of these cases could keep spirits of any kind in his room, but would be intoxicated all the time until they were exhausted. Relatives will write advising the strongest coercive measures, and then condemn the physician for using them. Parents and wives insist on using the physician as an agent for intimidation, and communication of family troubles and adjustment of various difficulties. The refusal or evasion by the physician of these requests deepens the suspicion created by the patient. In many cases the physician is appealed to to decide upon the future result of various alliances, domestic, matrimonial, and pecuniary, and any decision he may give will be condemned by either the patient or friends. Many very excellent people insist that the physician should act as a revivalist, and by prayer and entreaty seek to convert the patient. His neglect to assume this role is often open to serious criticism. The physician must hear these com-

plaints, and be advised by letter and personally what to do, and is expected to take a special interest in each case and be successful, even when the unfortunate has been drinking for a quarter of a century, and has failed to recover by every other means. In a few cases friends will thwart the efforts of physicians by sending money or spirits to the patient, who complains that he will die or become crazy unless he is helped in this way. When such cases are urged to go away or expelled, they become wild detractors of the asylum and its management. Many of these discontents relapse soon after leaving the asylum and blame the physician for their failure. The friends often join in their plausible prevarications and condemnations. Persons of this character will remain months in the asylum, never using spirits or violating any rules, and only be noted for chronic grumbling and complaints, then relapse in an hour after discharge. These are among the cases who stand on the street corners and in bar-rooms discoursing on the frauds and shams of asylums. The public who are most ignorantly suspicious of all asylums accept the statements of these incurables, and withhold the sympathy and interest which they should give. If a case escapes and comes into the police court the management is condemned as if they were criminals, and to many persons private asylums are expected to do what no other asylums, jails, or prisons can possibly accomplish. If anyone begins action against the asylum the public rejoice as if some great wrong was to be exposed and corrected.

There is another side to this dark background of misrepresentation and injustice which makes the work possible for students and pioneers. It is the small number of cases who come realizing their wornout condition and place themselves confidently in the hands of the physician. By co-operating and making use of all the means and methods used they recover, and go away into active life again and continue well. These cases have their seasons of depression and irritation, but recognize the source and seek relief from medical aids and appliances. The asylum to them is a hospital and quaran-

.ine station in which no miracles are performed, and no results except from the conscientious use of means and appliances. Such cases recover and disappear in active life, generally concealing this part of their history, in deference to public opinion. These people and their friends recognize the value of private asylums with its personal care and retirement, and its possibilities of permanent cure not so certain in large public institutions. The satisfaction of seeing many of these cases restored and returned to lives of usefulness, goes far to balance the heavy load of care and vexation which follows from efforts to help the incurables.

Private asylums are pioneers in face of very serious condemnation from the public, patients, and friends, and are working out the great problems of the medical cure of inebriates. If they were not founded on great principles that are vital, which are not affected by the clamor and delusions of the hour, they would quickly disappear. Private asylums as commercial ventures cannot exist long, but asylums founded on the principle of checking disease that is only dimly recognized in its true relations are pioneers to pave the way for a larger and more perfect work. Through opposition, misrepresentation, and bitter persecution, the road to success leads, and managers of private asylums can make studies and observe cases more closely than others with larger duties and obligations. Private asylums must depend on the changing, uncertain public for patronage; it must grapple with the problem of finding means and appliances to meet the needs of the most difficult and complex form of insanity without the legal power of control, dependent on the personality and skill of the manager and the uncertainty of attendants. Private asylums are doing a work of grouping and studying inebriates, pointing out facts that only an intimate personal association will reveal. To a certain limited number of recent cases the private asylum combines the best possible means for restoration, through its intimate personal contact with the case and its special requirements. To a larger class of more incurables the private asylum is literally an excellent

place for temporary restoration, with an occasional permanent recovery. In all cases the private asylum is a half-way house, between the home, the public asylum, the insane hospital, and jail. It cannot take the place of either, but it can accomplish more effectual results, in a certain number of cases, than any other institution. Private asylums for a limited number of cases, where each can have the personal care and attention not possible in larger places, are a recognized necessity. The harsh judgments of the public, and want of sympathy, and unjust criticisms of incurable inmates are powerless to destroy them. A few timid managers of such asylums may shrink from this ordeal and disappear; but to the student of this subject, who sees far beyond the present levels of public opinion, opposition and criticism are certain promises of full recognition and warm support in the near future.

THE vital statistics of Germany show that wine merchants and inn-keepers and retail vendors of spirits have a high death rate, especially after thirty years of age, when phthisis and disease of the kidneys are very common.

THERE are six great families of different alcohols, and each one of these families embraces a greater or less number of special alcohols. The list of known alcohols is very great; each one represents in combination an indefinite class of alkaloids.

The Hamburger Zeitung reports twelve hundred cases of delirium tremens and five hundred suicides among inebriates in Prussia during 1893. These were cases that came under legal recognition by the police, and do not include hospital or private cases.

A CASE OF PARALDEHYDE HABIT.

By Frank Ashby Elkins, M.B.,

Senior Assistant Physician, Royal Edinburgh Asylum.

When paraldehyde was first introduced to the notice of the profession as a hypnotic it was pointed out that one of the advantages of the new drug would be that, on account of its disagreeable taste and smell, a habit would not be likely to be acquired by those using it. The following case proves, however, that even with paraldehyde, as with most hypnotics and sedatives, there is danger of a habit becoming established.

For the sake of brevity, in this report the treatment adopted, except as regards the hypnotics used, is omitted.

A. B., married, a coachman, aged 65, was admitted as a voluntary patient to the Royal Edinburgh Asylum on November 23, 1892, on account of the paraldehyde habit.

Disposition and Habits.— He bore the character of a respectable, steady, cheerful man, but those who knew him well said he was liable to take offense easily, and was sometimes suspicious and unreasonable.

Hereditary History.— A brother who was alcoholic died in Inverness Asylum.

History on Admission.— For seven years he had been troubled with insomnia, and this symptom had been gradually getting worse. Two years and two months ago he began, under medical advice, to take small doses of paraldehyde, which he found useful. A habit was soon acquired, and on his own authority the doses were quickly increased, so that just before he came to the asylum he was taking as much as sixteen ounces of the drug a week. Under this treatment he became very emaciated, and lost two stones in

weight in the six months immediately before admission. He got so weak that he had to lie in bed, and was fed by his wife with a spoon like a child.

State on Admission.— He complained bitterly of the insomnia, saying that in spite of "seven teaspoonfuls" of paraldehyde he had slept only half an hour the previous night. He was emaciated and anæmic, and had an exhausted, harassed look. The tongue and facial muscles, and also the hands, were very tremulous, and, indeed, he was generally tremulous, like a case of *delirium tremens*. His gait was very feeble and unsteady, and all his movements were slow, like those of a very tired man. The heart's action was weak and irregular, the cardiac sounds being often difficult to hear, and the sequence of events difficult to follow. He complained of palpitation. The pulse was 74 per minute, and intermitted every 10–12 beats, and the volume of the beats was unequal. He complained of stomach derangement, especially of flatulence. The bowels were costive, the appetite was large, and he thought the paraldehyde increased it. He complained of strange feelings running through his body, some of which he described as "sort of shivers." He said he felt restless and nervous; and he was very anxious and, indeed, frightened about his condition. His breath smelt strongly of paraldehyde. The temperature was 98° F., and the weight 8 stones. The urine obtained during the first twenty-four hours was kindly examined by Dr. Noël Paton at the College of Physicians' Laboratory. Amount, 1,500 c. cm.; sp. gr. 1,020; reaction acid; boiling gave no cloud; picric acid and nitric acid gave faint cloud = albumose; with nitric acid marked pink color, probably straboxylsulphate of potassium; no reduction of Fehling's solution; urea, 1.2 per cent.; the distillate did not smell of paraldehyde. Although he was a voluntary patient, he was anxious to do much as he liked, and was not easily persuaded to do what was considered for his good. He brought with him a bottle of paraldehyde, and would hardly give it up. He begged to be allowed paraldehyde at night, and not any other

drug, as had been suggested. He expressed discontent at many of the arrangements made for him. His wife had waited on him hand and foot, and he no doubt missed her constant care and attention. He expressed much discontent with his room and his bed, and said he had expected greater comfort, and greater care and attention shown him. At 11 P.M., at his urgent request, and after having had some warm milk, he was allowed 3vj paraldehyde in 3iij of cinnamon water, and emulsified by tincture of quillaya.

November 24.— Slept five hours, and took a fair breakfast. At the visit he was sitting up, looking very depressed and discontented. It was very difficult to pacify him, and to impress upon him the importance of obeying orders for his own good. He complained that too much paraldehyde was allowed him the previous night, and said the only effect it produced was "drunkenness" for five hours. His pulse intermitted every 4–7 beats. At night he got 3iv paraldehyde. M. T., 98° F.; E. T., 99° F.

November 25.— He slept none. He was very restless and unreasonable, refusing to keep his bed or sit quietly in a chair. After a visit from his wife, however, he became more settled, and went to bed. The pulse was much steadier than on the previous day, although still frequently intermitting. M. T., 98.4° F.; E. T., 98.8° F. Had 3iv paraldehyde.

November 26.— He slept for one and a half hours. During the day he took food well, but was restless and not easily managed by the nurse. He would get up and walk about the room in his nightshirt. In the evening, at the visit his pulse was 96, not so strong, more irregular, and intermitting every twentieth beat. He was more nervous and frightened about himself. He asked the writer anxiously if the medicine were not poisoned. He was quite conscious that he had hallucinations of sight and delusions. He said he saw "strange beasts" about the room, and had "strange fancies." He was then, however, easily pacified. At night he refused his draught, and became greatly excited, under the belief that he was being poisoned. When seen he was

very restless, getting up out of bed and trying to put his clothes on to leave the asylum at once, in spite of the hour and of his weak state. Mentally he was very confused and delusional. He said his milk was drugged with laudanum, that he heard his death would appear in to-morrow's paper, that his wife had said she wished he were dead. He evidently had hallucinations of hearing. Finally, he declared he would be poisoned no longer by us, and he upbraided the doctors for giving him paraldehyde when he had come to be cured of the habit.

November 27.— In spite of the previous night's excitement, he slept one and a half hours. On awaking he was more composed, though still very nervous. At the visit he asked to be pardoned for his conduct, though he still seemed to partly believe the delusions of the previous night. His mental condition was very strange and contradictory. At times he was most anxious to do all he could to help in his recovery, and promised to obey all orders; and then in a few minutes his delusions and hallucinations had got the better of him, and he obeyed them. He would not go to bed, but sat fairly quiet in an arm-chair. The pulse was still very bad, and intermitted every 10–12 beats. Had no hypnotic.

November 28.— He slept none. In the morning he was very tremulous, agitated, delusional, and restless. He constantly walked about the room, and would not rest in any way. He said there was a woman in his bed, and that he could not get back there in consequence; he thought people were tormenting him; he said the doctors were poisoning him, and meant to kill him; he constantly thought the house was on fire. In a very shaky hand he signed the necessary document giving notice as a voluntary patient that he intended to leave the asylum in three days, and in a few minutes after he had forgotten all about the matter, and asserted that he had lived in the institution a year. That night he became utterly confused in his mind, and at times was incoherent in speech. E. T., 99° F.; pulse, 90, soft, and intermitted every 18–20 beats. Refused all medicine.

November 29.— He slept none all night, and was very restless and excited, hammering at his door and shouting. When up he tended to unbutton his clothes and to strip them off. He was seen by his wife and his own doctor, and they decided to have him certified, as his state, mental and bodily, prevented removal, and his being a voluntary patient had interfered with his proper treatment. In the evening he settled down once more, and went to bed.

November 30. —He slept one hour without any hypnotic, and was quiet the rest of the night. He was more composed in the morning, and anxious to continue the medicines he had been ordered, and wishing to stay. The tremors and agitation both were less marked. He seemed almost entirely to have forgotten the occurrences of the previous day.

December 1.— He slept one hour. He was more agitated and restless, and the nurse had great difficulty in keeping him in bed. He was full of suspicions and delusions, such as of impending harm to himself. He refused all medicine, but at night was persuaded to take some tea, in which was gr. xv of sulphonal.

December 2.— From his own account, this was the most comfortable night he had spent since admission, and he slept three hours. During the day he was fairly quiet, although delusional when talked to; yet he did not seem to believe his delusions so firmly. He had gr. xv of sulphonal in his soup at dinner, and slept one hour in the afternoon. At tea-time he had another gr. xv. The pulse had now ceased to intermit.

December 3.— He slept six hours, but said he had had bad dreams. After a good breakfast he again fell asleep. After this date he made a gradual recovery, getting sleep with smaller and smaller doses of sulphonal, taking food well, enjoying short walks, and rapidly gaining in flesh.

December 19.— The weight was now 10 st. 4 lbs. He had gained 2 st. 4 lbs. in the twenty-six days since admission.

December 22.— Was just a little suspicious and discon-

tented. He complained that just when he was going off to sleep he had strange sensations going down his arms to his hands. These sensations, he said, were most in the palmar surface of the hands, where there was slight Dupuytren's contracture.

February 21.— Since the beginning of the year he had been nearly well. He had full parole of the grounds. His weight was now 11 st., and his bodily health good. He generally slept well without any hypnotic, but a night or two every week he slept only about three or four hours. He was anxious to get back to work, and after promising not to take paraldehyhe again, he was discharged.

NOTES UPON THE CASE.

It will be noticed that many of the bodily and mental symptoms related above, with some notable exceptions, such as the extreme emaciation, the marked effect upon the heart's action, and the abnormally large appetite, are similar to those found in *delirium tremens;* and from the chemical relationship of alcohol and paraldehyde, this is what one might expect.

Not knowing what might be the effect upon such a weak subject, after such long use, of suddenly stopping the drug, it was intended to diminish the dose gradually, but the patient's mental condition prevented this arrangement from being carried out. It is possible that the more acute mental condition after admission to the asylum may have been due to the sudden deprivation of the long-used hypnotic. It is doubtful, in the treatment, how much credit should be given to the sulphonal, for it may be that a crisis was just about to take place when the drug was prescribed.

SUMMARY OF SYMPTOMS.

General Symptoms.— Great emaciation ; anæmia ; slight rise of temperature in the evenings.

Circulatory System.— Heart's action weak and irregular ; pulse intermittent and soft ; palpitation.

Alimentary System.— Stomach derangement, especially flatulence; costiveness; boulimia.

Respiratory System.— Breath smelt of paraldehyde.

Nervous System.— 1. Motor symptoms: General muscular weakness; general tremulousness, especially in tongue, facial muscles, and hands; gait feeble and unsteady; general restlessness. 2. Sensory symptoms: "Strange feelings" running through body. 3. Mental symptoms: Insomnia; great mental anxiety and agitation; discontent; unreasonableness; mental confusion; mental excitement; temporary loss of memory and incoherence of speech; shouting; tendency to strip himself; hallucinations of sight (he saw "strange beasts"); hallucinations of hearing (he heard his death would appear in to-morrow's paper, he heard his wife had said she wished he were dead); delusions (that he was being poisoned, that his milk was drugged with laudanum, that a woman was in his bed, preventing him from occupying it; that people were tormenting him, that the doctors meant to kill him, that the house was on fire, that harm was about to happen to him). It will be noticed that the hallucinations of sight and hearing, and the delusions, were all of an unpleasant kind.

Length of Time under Treatment.— About three months.

Result.— Recovery.

THE *Pacific Medical Journal* expresses the opinion that the hereditary evils of beer-drinking exceed those which result from the use of distilled spirits. It gives the following as its reasons for this opinion: "First, because the habit is constant and without paroxysmal interruptions which admit of some recuperation; second, because beer-drinking is practiced by both sexes more generally than spirit-drinking; and third, because the animalizing tendency of the habit is more uniformly developed, thus authorizing the presumption that the vicious results are more generally transmitted."

THE GROWTH OF PRACTICAL EFFORTS TO FOUND AND CONDUCT INEBRIATE ASYLUMS.

BY DR. ALBERT DAY,

Late Supt. of Washingtonian Home, Boston, Mass

GENTLEMEN,—Thirty-six years have elapsed since the organization of this institution, and most of the philanthropic gentlemen who were the founders of the Home have passed away. Two only, beside myself, are now living who petitioned the legislature for an act of incorporation, enabling it to hold property and for other corporate rights. In the same year of the passage of this act, the legislature voted unanimously to give the sum of three thousand dollars for the purpose of carrying out the intentions of the institution: *viz.*, "for the providing a retreat for inebriates and the means of reforming them." The legislature continued to pay the sum of three thousand dollars, and some years a larger sum was granted until the year 1872, when further aid was withheld, since which time the institution has been self-sustaining with the aid of its invested funds.

The institution was established in the full faith that many of the evils of inebriety were susceptible of successful treatment, and that, in a large number of cases, inebriety might be eradicated and cured by strict régime, appropriate therapeutic measures, and by proper restraint, in an institution designed and conducted for such purposes. This belief has been confirmed by the experience of over thirty-six years, and from certain data in our possession we have reason to believe that the number of patients successfully treated

* The following was delivered before the members of the corporation of the Washingtonian Home, and is the last public address of Dr. Day.

and restored to lives of sobriety and usefulness will fully equal the ratio of cures in any of our lunatic asylums or recoveries in our hospitals for the treatment of other diseases.

While the idea of establishing asylums for the medical treatment of inebriety is older than the generation now quite advanced, its practical adoption and the efforts of treatment are comparatively recent.

The thirty-six years last passed have developed all that has been attempted in this direction: consequently it is not surprising that even at the present time a large class of our people, comprising some of the learned and intelligent, still regard the establishment and maintenance of such institutions as a novel and doubtful expedient, and with little or no information upon the subject condemn the project as utopian and fruitless.

During the last generation much diligent inquiry has been made by the medical faculty and philanthropic laymen into the nature of alcohol and its action on the human system, and its mental developments.

As one result of scientific inquiry into the pathology of inebriety, a decided change has taken place among thoughtful people. Once the use of spirituous liquors was regarded by the people as right and entirely innocent — the only qualification being they must be used in moderation. Now their use as a beverage is regarded by all who have cared to give the subject their close attention, as useless and in every way harmful. Out of this latter conviction have been developed several practical problems.

First. By educational influences, moral precepts, and examples, prevent the use of alcoholic liquors among the young and innocent.

Second. To induce those who are addicted to what is termed moderation in the use of intoxicants to entirely abstain — for a larger percentage of those who indulge will ultimately become inebriates or dipsomaniacs.

Third. To reclaim those who by their excessive use

have become drunkards, and beyond the power of self-control. The moderate drinker will often ridicule every intimation that he is in peril from the habit. He is accustomed to say, "I can drink or let it alone, just as I please,' but as a matter of fact he drinks, he does not let it alone.

The problem of the reclamation of the drunkard is the one about whose solution this institution is particularly concerned.

In order to furnish a solution of any problem, an hypothesis in which to proceed is necessary, and it is well understood that a true hypothesis will embrace all the conditions of the problem; a theory in any given case must account for all the phenomena of drunkenness. My question then becomes, What theory will account for all the varied conditions of inebriety? It is very clear that the excessive use of intoxicants affects the whole being of the drinker, — his physical, mental, and moral nature. A disease is a derangement of any of the vital functions, or a departure from, in any degree, from any cause, the condition of normal health, and this applies literally to the condition of one who has for any length of time imbibed immoderate quantities of alcoholic drink.

Insanity is unsoundness of mind, which is the result of alcoholic indulgence, to a greater or less degree. General paralysis is pronounced in such cases, as is shown in the impairment of judgment, loss of memory, absurd conduct, violation of all the tenderest relations, and disregard of the common decencies of life. The deterioration of moral character is quite as apparent in the inebriate as bodily disease and mental disturbance.

If this be true of the dipsomaniac, or confirmed drunkard, it is evident that he requires physical and moral treatment. This is fully recognized by this institution, and the man or community who would inflict punishment in any form upon such can be but one who sniffs the spirit of the dark ages.

Our aim is to restore such unfortunate men to a normal

and healthful condition of body and mind. Our mode of treatment is intended to meet every need of the unfortunate man that comes to us for help: it is comprehensive, and our long and varied experience enables us to reach the many phases of the drink trouble. We do not pretend to put a man in a condition in which he cannot drink, but in a condition in which he need not drink. It leaves him where his Creator intended him to be, a sober man, with a clear reasoning mind, which, with its powers properly exercised, will not only enable him, but actually cause him, to look upon alcoholic stimulants with loathing and abhorrence.

We hear much about removing the appetite for alcohol. Quacks play upon that string; they claim to have some mysterious drug which takes away the appetite, which is all a myth. When such cases are under proper treatment and the system toned down to a normal condition, his nerves quieted so that he obtains sleep and rest, a healthy appetite for food restored, a new hope is awakened and he is placed on the high road to a reformed life; then the appetite for alcohol is laid at rest and never will be awakened unless he is foolhardy enough to try his appetite with a few glasses of intoxicating drink; then he will find the old slumbering monster will arise with all its accustomed power and vigor, and his last estate will be worse than the first.

The question is often asked of us, "What percentage of your patients are permanently cured?" They are about all cured in once sense when they leave us, but how many will stand firm it is quite impossible to say. The letters and calls we frequently receive from those who have been under our care lead us to believe that many are cured, while others are struggling for a better life.

> . . . "Ours is the seed-time,
> God alone beholds the end of what is sown;
> Beyond our vision, weak and dim,
> The harvest-time is hid with Him."

One thing I am certain of, and that is, more are permanently

cured than the public is aware of. If one falls, certain incredulous persons believe they all fall, and none are cured. It must be remembered that we are dealing with one of the most subtle diseases, the nature and pathology of which is now receiving the attention of the best minds and the closest investigations of any subject connected with mental pathology. These investigations will open a wide field of thought, and much good to mankind will be the result. Light will shine into dark places, and mysteries will vanish before the light of scientific investigation.

It is not my purpose to criticise the labors of temperance people in the past. I have been one of them for quite fifty years, although working on a different line from most of them; and however commendable the motives and purposes of the many busy workers in the temperance field at the present time, there seems to be a great expenditure of force with, thus far, but little compensatory result.

This can only be accounted for by the fact that a great deal of energy has been misdirected and expended upon a comparatively barren surface, while the naturally prolific underlying soil has been left unbroken and unexposed to fructifying influences.

Feeling and enthusiasm are admirable qualities, characteristic of all great reformers, but success cannot always be achieved by feeling and enthusiasm alone.

In all matters pertaining to the more important interests of society a comprehensive knowledge and consideration of correlatable facts, and an adjustment of activities to recognize principles generalized from such facts, are indispensable to the highest order of success.

The applicability of one well-ascertained law, or uniform result of natural activities, — for example, the law of gravitation as affecting motion, or the law of evolution as affecting organization, — is almost unlimited; and he only should be called a philosopher or regarded as a statesman whose thoughts and actions are directed by a knowledge of such principles as must necessarily determine results.

And here it may not be amiss to suggest the fact that a great error, akin to that of surface work, or mistaking shadows for substances, is the disrespect or disregard which so many enthusiastic would-be-reformers have for the element of time as a factor in all economic calculations. They forget the wise saw, "Make haste slowly." They estimate work by its immediate results, and mankind, their conditions, prospects, and necessities, by the generations in sight or living within the limitations of a century. Temperance is to be the work of centuries, and not of months and years.

Mankind is old; we are a part of earth; we belong to the universe; through centuries and cycles man has been growing; through unimaginable ages yet before him it is probable he will continue to develop. We wonder, when we observe what rapid strides the advancing races of mankind have made during our short lives. Every decade is hurrying forth some wonderful invention, and I believe there is no limit to man's intellectual development. Old things are certainly passing away, and it is equally certain that all things are gradually becoming new.

Many reformers ignore the element of time in consideration of anticipated or desirable changes in human affairs which they labor and hope to effect. Sometimes they will announce from the platform that certain things were about to be, or had already been accomplished, which would necessarily require years, if not centuries, to bring about. This is sometimes a physical defect or infirmity; with many others it is zeal, associated with a lack of information, or an inability to estimate facts by a correct standard of values.

Inebriism is a condition of a person who by habit becomes intoxicated, — poisoned by the use of alcohol, or any other intoxicating or poisonous agent. A condition of inebriety itself cannot be authoritatively stated. A person should be considered intoxicated, however, whenever the functions of the brain are impaired instead of stimulated, as manifested by any degree of paralysis-thick-tongue, stiffness of the face, numbness of the upper lip, incoherency of ideation, perver-

sion of feeling and emotion, etc.; and the fact that a person deliberately repeats the experience of intoxication, or the well-known effects of an intoxicant, from time to time seeking for, rather than avoiding, such experiences, should be regarded as sufficient evidence of disease.

In fact, it may be possible, and often is so, that a man may be an inebriate (more likely an habitual than an occasional or periodical drunkard) for a long time before other than his most intimate friends have any knowledge, or even suspicion, of the fact.

It is not necessary that persons should become completely "beside themselves" every time they become intoxicated, or that they should become so far paralyzed as to stagger or fall, or become unconscious before they can be classified as inebriates. It is not indispensable that they should become blear-eyed, bloated, red-faced, foul-breathed, weak-legged, sore-footed, husky-voiced, coughing, tobacco-stained, ragged, and malodorous, to be recognized as such.

There are inebriates in every community, in every class of society, in every occupation, in every profession. Confirmed inebriates resemble each other, as a class, in some general characteristics, however dissimilar their circumstances and life relations, and they all tend toward the same general level of human degradation. They are not all alike vicious, or violent, or obtuse; yet their movements are all downward toward a plane of life where common conduct is itself vicious, and crime is a natural concomitant.

Like all other beings, they are what they are by reason of what they inherited and what they have acquired. They inherited weakness, and they have acquired depravity. They belong to that grand division of natural objects, the "constitutionally unfit," who, in common with the weaker and more defective in every natural order of living things, are, by virtue of their conditions and relations to the force which moves them, tending toward extinction through progressive deterioration and decay.

In the light of reason and philosophy, what ought society to do for this line of human deterioration and decay?

It is one of the problems of civilization, of science. What is the duty of the strong towards the weak? In savage life, as with lower animals, the very defective perish in early life. Civilization does much to preserve life in the frailest specimens of mankind. Even idiots are cared for with solicitude and expense. Among the savages, the cripple, far spent and burdensome, is helped toward dissolution; civilization pensions cripples, builds palaces for the insane, and surrounds its invalids with luxury; civilization can afford to do this, and ought to do so.

In the battle of life some will fall by the wayside. There are those with their own besotted brain, with their cup running over with blissful ignorance, pass by on the other side, or in the temple of their own bigotry lift their palms heavenward and thank God that they are not one of the fallen ones.

Inebriety is a disease of an intermittent, remittent, or continuous type, which has prevailed to a greater or less extent in all of the inhabited parts of the earth, at all times since mankind began to leave a record if itself, if not before.

It is a self-limited disease in its milder or intermittent form, with a certain tendency to become chronic and continuous by frequent repetition.

It belongs to the history of drunkenness to remark, that its paroxysms, like the paroxysms of many diseases at certain periods, are often at longer and shorter intervals. They often begin with annual and gradually increase in their frequency, until they appear in quarterly, monthly, weekly, and quotidian or daily periods. Finally, they afford scarcely any period of remission, either during the day or night."— *Dr. Rush*, Philadelphia, in 1812.

The symptoms of inebriety are as well marked and as uniform in their succession as are the phenomena of any other disease of a specific character resulting from specific causes, such as typhoid or miasmatic fever, diphtheria, or small-pox. Unlike most other diseases, which are generally ushered in with a chill, the first symptoms of inebriety are a sense of growing warmth and comfort, and a general exaltation of all the functions of the body including the mind.

This stage of inebriety is of short duration, being rapidly succeeded by other symptoms, following in a definite order, among which are a gradual diminution of special and general sensibility, dizziness, loss of muscular power, and co-ordination of muscular action, watery sensations throughout the body, etc., passing through all other changes into temporary paralysis, partial or total, and unconsciousness more or less profound.

The pulse and respiration are both increased in the early stage of the disease, but soon diminishes in frequency, the pulse becoming slow, but full, and the respiration somewhat irregular, if not stertorous. The skin is dry always until the active symptoms begin to subside, when it may become moist and finally bathed in perspiration. All these phenomena may occur, and the patient begin to recover within the period of an hour or two.

The secondary effects of inebriety are characterized by fever, headache, nausea, sweating, tremor, ill-nature, depression of all bodily functions, and a general sense of weakness, weariness, and discomfort.

The disease is often arrested short of paralysis and unconsciousness by reason of insufficient provocations; and the secondary effects are so often averted by a repetition or reinstigation of the early stages of the disease by fresh stimulation before the secondary symptoms are obtained.

The disease becomes more interesting, however, to the scientist and socialist because by characteristic mental phenomena which attend its various stages, constituting for the time being a genuine disorder of the mind, which results in consequences reaching far beyond the immediate suffering of the patient.

These mental symptoms of inebriety correspond in character and continuation to the physical conditions and changes which are effected by the disease. In the earlier stages, as said before, there is a general exaltation of mind, exuberance of spirit, garrulity, followed by taciturnity; or the sudden development of true mania, which may decline into a typical

melancholia or dementia, as the disease progresses. These mental symptoms all disappear with the subsidence of the disease in simple intermittent cases, but when the disease becomes chronic or continuous, there is a corresponding continuity of mental disorder, sometimes culminating in a peculiar frenzy or delirium, characterized by illusions and hallucinations of a painful, even terrifying nature, which the patient sometimes recognizes as false sensations and imaginations, but which he cannot correct or banish.

The police often make wrong diagnoses in cases of persons found on the street in an insensible condition. They have declared persons intoxicated when they had fallen with apoplexy or some other disease preceding insensibility. There is little danger of error in diagnosticating drunkenness by a competent physician, who should always be called when there is doubt as to the condition of the individual. To differentiate the disease from apoplexy or paralysis it is only necessary to wait for a mitigation of the symptoms, notice the odor of the body, and ascertain the habits of the patient, and the more immediate commemorative circumstances of the case. To distinguish some of the mental conditions of inebriety from diseases of the mind originating from other causes, is sometimes more difficult and more important. The assertion is often heard in common parlance, "He was either drunk or crazy, it is hard to tell which." In such cases we have to depend almost exclusively on clinical history; consider each case separately and on its own merits. An insane man unaccustomed to intoxication may suffer a paroxysm of inebriety, an inebriate may become insane beyond, and independent of, the immediate presence of the disease.

Inebriety predisposes the system affected by it to fatality, in a marked degree. Structural changes of important organs of a degenerative character are frequent results of chronic inebriety. The liver, kidneys, stomach, blood-vessels, and brain, are the organs which suffer most seriously from the disease, in the order stated, as to frequency and importance.

Directly or indirectly through the nervous system the stomach suffers in every case, and from this cause as well as by action of various poisons which cause inebriety, we have the various organic degenerations induced, which in most cases shorten the inebriate's days. The expectation of life for the inebriate is, therefore, much below the average of persons otherwise sound. Habitual drinkers are ruled out of the risks of all reputable life insurance companies on this account.

Whenever pestilence (cholera or yellow fever) stalks abroad, the chronic inebriate is the first victim. He seldom escapes attack, and rarely, if ever, recovers from it.

The causes of inebriety may be classified like the causes of other diseases, as predisposing and exciting. The exciting causes are neither numerous nor yet single, nor are they occult, or in any sense of doubtful character. It is invariably by the ingestion of some foreign substance in sufficient quantity to produce its specific effect, known in medicine as a stimulant or a narcotic. There are two classes of stimulants or narcotics which are capable of exciting the disease. One class is made up of natural products, vegetable growths, the other of artificial products, the result of fermentation and distillation. They are called artificial products only because certain favorable conditions facilitating their natural development are instituted by man, who, by his observation of nature, discovered the result of fermentation and appropriated the knowledge to his own uses. The natural substances capable of producing inebriety are opium, hashish, and other less notable substances in common use. The most notable substance (because most frequently the cause of inebriety) capable of producing the disease is alcohol, to which is allied the various ethers.

In our consideration of the disease, however, we may discard all the alien substances excepting opium and alcohol, inasmuch as nine-tenths of all typical cases of inebriety are caused by one of these two in some form of their various preparations; and of these two in the country, alcohol is more frequently the cause than opium among men, while many more women are victims of the other drug.

The predisposing causes of inebriety are quite numerous, and are neither thoroughly understood nor well defined. That there is an organic appetite for brain stimulants, which, if not originally so, has become organic through unknown ages of indulgence common to mankind, is beyond dispute. This appetite (which is normal to mankind) does not anticipate for its gratification more than the primary or stimulating effects of the drugs used. So agreeable and inferentially healthful to all the organs placated by the happy brain is, nevertheless, the primary predisposing cause of inebriety. It is through this appetite, undoubtedly, that the system is often exposed to an unexpected and an undesired effect of the drug used, and a painful condition of the body induced by such unintentional excess which can in no other way be so speedily and effectually relieved temporarily as by the repetition of the excess itself, by renewed stimulation of the organs suffering, or in an obliteration of sense by a more complete narcosis (dead drunk) than was at first induced.

It is probable, also, from the clinical history of the disease, that any cause of exhaustion of a special character, especially such as affect the brain and spinal cord primarily, or a deprivation of nutritious and palatable food on account of insufficiency or bad cooking, or an inability to digest and assimilate food of a sufficiently stimulating character, becomes a predisposing cause of inebriety. Debilitating and defective organization, indicated by eccentricities of body and mind, are predisposing causes of inebriety. Irregularities of life, over-excitement of mind or body, loss of sleep, and all excesses, are predisposing causes of the disease. Heredity, or the transmission of organic types of nutrition affecting development or growth; the perpetuation of acquired ancestral conditions or tendencies of the activities of nature to force the variously unfit to still greater unfitness and final dissolution, manifested by a multitude of cachexies, is a cause of the disease, beyond a doubt.

The offsprings of an inebriate do not all become such and follow the parental habit, yet more of them in proportion

to their numbers do so than is the case with children of sober parents. On the higher planes of organic evolution, nature requires the congregation of two bodies of different types of organization for the reproduction of themselves, and thus restores the equilibrium or type as far as may be of race characteristics; yet it often happens that such union of parents, because of mutual defects or depravities of structure, defeats the end at which nature seems to have been aiming.

Nor is it necessary that the characteristic of the offspring's infirmities shall be identical with the infirmities of the parents. There is no organic defect or proclivity to brain and nerve disorder inherited by a child, manifested by idiocy, imbecility, epilepsy, hysteria, insanity, or inebriety, that may not have been transmitted from a drunken parent. So may the conditions from which spring the thirst for stimulants and drive a son to drunkenness have been derived by descent from an epileptic, hysterical, insane, or otherwise neurotic parent, not a drunkard.

As to the treatment of inebriety, it would be difficult to suggest any special, for the reason that each individual may require special treatment, taking into account in diagnosis the age, temperament, and the general physical condition of the patient. I can say in all truth, and from a lifetime spent in the care and observation of the intemperate, that all pretended "antidotes" are worthless frauds. Efforts have been made to successfully substitute one stimulant for another less potent, and to so wean the patient from strong drink; such experiments have not been satisfactory.

Food, and such a regimen as will conduce most actively to digestion and assimilation of nutritious diet, is the only rational substitution, and constitutes the proper treatment so far as it goes.

All the moral forces should be employed by those who struggle to be free from the debasing influence of alcohol.

Some persons, even physicians, have advised the gradual discontinuance of intoxicants, but no man thus diseased has

power, prudence, or fortitude equal to the task of curing himself. If a patient were in close confinement, where he could not help himself, he might be dealt with in this way, but it would be cruelly protracting a course of suffering through months (if ever cured in that way), which might be ended in a few days, with a proper medical treatment; but no man at liberty will cure himself by gradual retrenchment. Substitutes have also been recommended as the means of cure, such as opium, which, as I have shown, is only another mode of producing inebriation, is often a temptation to intemperance, and not infrequently unites its own force with those of alcoholics to impair health and destroy life. It is a preternatural stimulant, raising excitement above the tone of normal health, and predisposes the system for intemperate drinking.

Beer has been recommended as a substitute for stronger liquors, and a means of leading back the captive to health and liberty. But though it may not create intemperate habits as soon, it has no power to allay them. It will finish even what the stronger liquors have begun, and with difference only that it does not inflame the vital organs with so keen a fire, and enables the victim to come down to his grave by a course somewhat more dilatory and with more of a good-natured stupidity of the idiot and less of the demoniac frenzy of the madman.

Wine has been prescribed for the cure of inebriety, but habit cannot be thus cheated out of its dominion, nor raving appetite be amused down to a sober and temperate demand. If it be true that persons do not become intemperate on wine, it is not true that wine will restore the intemperate or stay the progress of the disease. Enough must be taken to screw up nature to the tone of cheerfulness and hilarity or she will cry "give" with an importunity not to be resisted; and often for awhile wine will fail to minister a stimulus of sufficient activity to rouse the flagging spirits, and will so derange the stomach that brandy and opium will be called in to hasten to its consummation the dilatory work of self-

destruction. So that if no man becomes a sot upon wine, it is only because it hands him over to more fierce and terrible executioners of delayed vengeance.

If in any instance wine suffices to complete the work of ruin, then the difference is only that the victim is stretched longer upon the rack of torture, with complicated disease, while strong liquors finish life by a shorter and perhaps less painful course.

Retrenchment and substitutes, then, are idle, and if in any case they succeed it is one in a thousand.

Nature must be released from the unnatural war made upon her and be allowed to rest, and with nutrition and sleep, with what medical treatment may be required, the work of restoration may be quite certain.

Gradually the spring of life will recover tone, appetite for nutritious food will return, digestion will become efficient, sleep refreshing, and the muscular system vigorous, until the elastic heart with every pulsation shall send health and joy through the system.

That intemperance leads to criminal acts is known by every one to be true; men do not become drunkards from deliberate choice, it is not from moral perverseness that they continue to do so, or to drink immoderately without inebriety. A temperate person, if not an inebriate, is not ignorant of calamitous consequences of intemperance; none can better appreciate the arguments the inconveniences and sufferings incident to the alcoholic habit, than one who experiences them. To convince a drunkard that drunkenness is a heinous sin or a crime is not to effect a cure, but will induce discouragement, and may have an opposite effect from what is intended. These views are not to be construed into an apology for intemperance, but they constitute a plea for compassion and assistance in behalf of a class of unfortunates than whom none are more in need of sympathy and curative aid; nor does this attitude toward the drinking man betoken any lack of appreciation of the evils of drunkenness, but, on the contrary, these evils will dimin-

ish in proportion as dipsomania is regarded as a pathological condition, be successfully treated.

If in our life's labor we can in any degree convince the public and call forth favorable action in the proper treatment for the most unfortunate of our race, we may retire from the active duties of life, satisfied that we have not lived in vain.

A REPROACH TO OUR CRIMINAL SYSTEM.

Whenever a "frightful example" is wanted to display the crying need of legislation for dealing with habitual drunkards, there is Jane Cakebread to supply it. Her story is always the same. In the morning she is let out of prison, and wanders aimlessly about, with no home and nothing to look forward to. Then some one gives her a few coppers, which are at once spent in drink, and there is another interview with a police magistrate on the following day. The public, who are amused by watching her antics in court or reading about them in newspapers, regard Jane Cakebread as a standing joke; they do not realize what a reproach it is to our criminal system that this woman should be abroad uncontrolled. Her 269 convictions are almost an exact record of the number of days she has spent at liberty throughout the last thirty years of her life, and she is now sixty-two. Mr. Lane on Saturday gave her a month's imprisonment, many magistrates have given her many previous months, with the full knowledge that in a month and a day's time she would again appear in a police court. And that is all that the State cares for her and her class. She cannot go to a home for inebriates because she has no money. If she goes to a workhouse, when the craving for drink returns she can demand to go out, and there is no power to restrain her. Had she the fortune to suffer from any other form of nerve malady she would be taken care of, lead a happier life, and be treated with skilled attention. As it is, she is turned loose to wander miserably between the streets and the prison. — *The Morning* (*English*).

Abstracts and Reviews.

NORTHCOTE RETREAT FOR INEBRIATES—ITS WORK AND AIMS.

We present the following letter from the pioneer worker in Australia, Dr. Charles McCarthy, which, although written some time ago in reply to an inquiry from the Lunacy Commission, gives a clear idea of his broad, comprehensive view of this subject. Dr. McCarthy has since been sacrificed to the selfishness of politicians, and his pioneer work is conducted by others. Whatever may be the result of the present inquiry, Dr. McCarthy has won a place among the few great hero workers whose name and memory will go far down into the future:

"I have the honor to acknowledge the receipt of your communication of the 21st instant, requesting me, in the name of E. L. Zox, Esq., M.P., chairman of the Lunacy Commission, to furnish you with a report on the state of this establishment, with any suggestions I may think it desirable to make that would have a tendency to bring about an improvement in the conduct of such refuges for the afflicted, more especially with regard to State aid being afforded to semi-private institutions.

"I have the honor to state, in reply, that it affords me much satisfaction to comply with your request, and to give you my matured opinion, being the result of my considerations for over a quarter of a century on these matters, during half of which time I have had the opportunity in this Retreat of putting my opinions to the test of practical application.

"1. This Retreat was opened in 1873, being the first in the world to which was given by act of Parliament (1872) power to *compel* inebriates to enter.

"2. This was the result of my agitating the question from

1859 in the public press, followed by liberal donations from persons of all denominations, supplemented by government support till the beginning of 1875, since which time nothing has been received from government, and very little from the public since that year, as I then almost ceased collecting, my duties in the Retreat preventing me. The Retreat, therefore, since 1875 has been dependent on and supported by the receipts from the patients, the act of Parliament, or rather the regulations of the Governor in Council, restricting the charge, even to the most wealthy, to £13 per calendar month; but practically this restriction is not of much importance, as sixteen out of every twenty applicants refuse to enter even when I considerably reduce the above charge.

"3. The cause of the majority of the 80 per cent. not entering the Retreat after application by their friends depends on the inability or unwillingness to pay for their care and cure; the sentiment of shame or delicacy is never thought of. I observe the names of many of these persons in the death columns of the daily papers. This same cause accounts for my being of late years obliged to have several removed to the lunatic asylum after a few days in the Retreat, the friends having delayed too long.

"4. If I could admit inebriates for what their friends were willing or able to pay, I would have ten times the number of patients that I could accommodate; but a mortgage of £1,500 at present on the property, together with the expense of the establishment, prevent me accepting in too many cases the amount offered; hence my inability to carry out my original intention of admitting rich and poor. The buildings and furniture and land (exclusive of interest paid on mortgage for twelve years) cost me more than the government and the public together contributed (a Chief Secretary having promised 'houses and lands, if the public subscribed a moderate sum'). The government contributed in all £2,500, and the public over £2,000.

"5. However, experience now convinces me that rich and poor could not satisfactorily be brought together at the same table for their meals; and this brings me to the point I

especially wish to dwell on. By the poor I mean those unable to pay a reasonable amount, or a small sum, or anything.

"6. Among those who are unable to pay there is one class in whose favor an exception ought to be made, namely, those who had seen better days, and whose education, former position, conduct, and antecedents fit them to associate with those who are able to pay.

"7. Those who are able to pay should certainly be divided into two classes, or rather I should say that the conduct and influence of some are so bad that they ought not to be allowed to associate with the well-disposed. The vicious class, of course, could not be ascertained at the time they enter, but they very soon reveal themselves. I call them vicious, but there is a good deal of moral insanity mixed up in their state.

"8. From the above, it appears to me absolutely necessary that there should be two classes of inebriate retreats—one for those who are able to pay, including those who are described in section 6. This I shall call A, and may be a semi-private institution, such as this in Northcote. The second, called B, for those who can only pay a small amount, or nothing, including those described in section 7; this ought to be under the direct or indirect control of government, and *work made obligatory.*

"9. The semi-private retreat A, as stated, should consist of those able to pay, and of those who may be unable to pay, but, as stated in section 6, deserve to be admitted; that is to say, those who may be recommended as such, say, by the mayor, or police magistrate, or a bench of magistrates, of any city, or town, or borough, the payment for such coming from the spirit licenses of such city, town, or borough.

"10. A retreat for class B, by far the most numerous and urgent, should be established for males and females, at some distance the one from the other. This institution should partake of the nature both of an inebriate retreat and of an industrial institution, work being an essential

character thereof. For this purpose, there should be one or two large farms devoted to the purpose near some railway, at a distance from any town, on which should be erected plain two-story buildings, with a resident medical officer, everything in the way of extravagance in building, furniture, diet, etc., being strictly avoided, so as to do the greatest amount of good with the least possible expense. Of male patients, nineteen out of every twenty could work after a fortnight's residence in the retreat; and, without compulsion, not more than one out of twenty will consent to do any kind of work, though employment is one of the most essential and effectual means of cure; any overplus of earnings above the cost of plain diet, attendance, and watching should be sent to their families. I say plain, cheap diet, for such would do them more good than the most expensive fare had done during their indulgence before entering the retreat, extravagance being injurious, unnecessary, and unbecoming.

"11. Next to work, *time* stands the greatest factor for cure, six months being necessary in the majority of cases, both as to males and females, perhaps longer for the latter. It is on this point that the most frequent mistakes are made, by friends trusting in the promises of the patients, which promises are not of the slightest value till they are in for six months, or in some cases longer, from the fact that almost all will power in this regard is lost.

"12. Dipsomania is a disease of the brain, essentially *moral* insanity — that is, a disease in which the moral faculties suffer more than the intellectual faculties, and of all the moral faculties the will-power suffers most. There can be no dipsomania without disease of the brain. This disease is generally caused by alcohol, but it may be caused by insanity, heredity, sunstroke, or any injury to the brain from mental shock or external injury. From whatever cause arising, the result is moral insanity, which ends, in 99 cases out of 100, in mental insanity or death; a dipsomaniac can no more cure himself than can a lunatic. He cannot, and he will not, refrain from the cause, and that cause is daily rendering his state more difficult of cure, until structural disease of the brain renders him incurable.

"13. The manifestations of brain disease in dipsomania are the same as the symptoms that appear in incipient insanity, but, as stated, they appear first in the moral faculties. Thus in dipsomania the desire to deceive is almost universal. They deliberately tell untruths without seeming to know that they do so; they deceive themselves as well as others; like lunatics, they are extremely suspicious, especially of their nearest friends and relatives — they are not in fault, but others are; they are totally indifferent about the rights of others, and most jealous of their own; they are selfish; almost universally averse to any kind of employment, especially those accustomed to manual labor; they deny having indulged, as well as the necessity of entering the retreat. They are very desirous of seeing their friends frequently, for the purpose of inducing them to take them out of the retreat by every argument that they think likely to succeed, and the more unfit they are to leave the more importunate they become; they pretend that home affairs are suffering by their absence, and if let out they would remedy everything; but if allowed to leave, a few days dispel the delusion, and they rush madly to the alcohol, always giving some temptation or worry as an excuse. Nothing but a lengthened period in the retreat can cure such persons; they are quite incurable if left to themselves, and can only be saved by external control; they have no control over themselves; they have no will-power to wage war against their indulged passions, and they have no desire to do so, and too many of them far prefer to be let alone than to be cured. Herein lies the difficulty of the medical man — his patient does not desire or wish to be cured — and under this rare difficulty (rare as to other diseases) the medical man's sole dependence is upon *time*, which supplies him with three potent remedies, *viz.*, the stoppage of the alcohol, the application of his remedies, and to allow nature to correct his patient's second acquired nature.

"14. Seeing that the dipsomaniac is suffering under a species of insanity, which neither he nor his friends can cure at home, that this state infallibly leads to the lunatic asylum

or the grave, that he is ruining his family, that he is not responsible for his actions, that the public must ultimately support him in a lunatic asylum or jail, and perhaps his children in orphanages, reformatories, or prisons; that our licensing laws have much to answer for in this matter; that it is better to prevent lunacy than try to cure it; that the cure of dipsomania is much easier and more certain than the cure of lunacy of the same duration, in the proportion of six to one; religion, humanity, economy, and good policy demand that Parliament should come to the rescue. As to the means, there is neither mystery, doubt, nor difficulty either as to the cause of the disease or the means of prevention or cure: Lessen the number of public-houses by proper licensing laws, thus enabling publicans to conduct their houses honestly. Establish such a retreat as I describe in section 10; let the disease be treated as a disease, and not as a vice or crime, as in simple drunkenness. It is savage ignorance to send dipsomaniacs to prison; it is much the same as sending lunatics to prison — in one sense it is worse, as it is depriving the one most likely to be cured of his only chance. I may be asked here do I mean these remarks to apply to drunkards. Certainly not, though a short residence in a retreat would bring much benefit to the families of many drunkards, and would be a public gain. Again, I may be asked, How distinguish a dipsomaniac from a drunkard? Medical men have no difficulty in that respect, neither have the friends: a drunkard can refrain from drink, a dipsomaniac cannot.

"15. It has been said by good authority that it would be much cheaper for the public to support burglars and thieves in prison than that they should be at large. I say the same of dipsomaniacs, only substitute retreat for prison. The sooner this is done the better, as lunacy is enormously extending, owing to the abuse of alcohol. The public statistics of this colony give only about 20 per cent. of lunacy; it certainly should not be less than 60 per cent. About 1871 the late Dr. Bayldon, physician at Yarra Bend Asylum, said that during the previous year '33 per cent. of the breadwin-

ners owed their lunacy to drink,' but he added that the 'inquiry had cost him so much time and labor that he would never again attempt such a task.' Dr. Embling, when medical superintendent of Yarra Bend, stated that 50 per cent. were from alcohol, the late Dr. Bowie, in his time, 70 per cent., and Lord Shaftesbury, when sixteen years chairman of the English Commissioners of Lunacy, 60 per cent.; in England, according to Mr. Corbett, M.P., lunacy is now much on the increase.

"16. The public statistics as to deaths from alcohol, as well as lunacy from the same cause, are utterly unreliable and useless. The friends of those who die of alcohol expect their medical attendant to certify that death was caused by some disease induced by alcohol. Alcohol is never stated as the cause of death unless in some notorious cases, as in coroner's inquests; and as to lunacy, the medical certificates required by law only state what the medical men there and then observed, and what they heard from others as to lunacy or non-lunacy — there is nothing required as to the cause or causes. Friends have a great reluctance to acknowledging that either death or lunacy was caused by alcohol, and expect their medical attendant to certify to the immediate, not the remote or primary, cause. If the Parliament required every medical man in the colony to make a solemn declaration of the real cause of death, remote and proximate, then, indeed, a black list would be produced to the credit of alcohol.

"17. As it is of the utmost importance that both the commissioners and the public should be clearly informed as to the questions about dipsomania as a disease, as a vice, as an acquired habit, or as an evil which it is in his own power to shake off whenever he choose, or whether he is responsible for its continuance, or for his actions having relation to this while in that state, these questions are at present being investigated in England by a society established for the purpose. When a man takes much alcohol for a length of time short of drunkenness, his brain becomes hardened; at a later period of his indulgence it becomes softened. Again,

if a man has become frequently drunk, he is on these occasions temporarily insane, whether he suffers from *delirium tremens* or not; after an uncertain number of these drunken bouts he has softening of the brain, known as dementia, or, in common language, the man is said to be silly or paralyzed. When this state arrives he is unfit for anything, and is generally incurable. It is then too late to send him to an inebriate retreat; he cannot be restored to a healthy state; he is probably permanently insane. It is from these two classes that our lunatic asylums are filled.

"18. Drunkenness becomes dipsomania when the person says and feels that he must have alcohol whatever may be the consequences, and when the craving becomes so intense and irresistible that no consideration can restrain him; this is a diseased state, a state of moral insanity, no matter how he may reason, or how clear his intellect; and a celebrated American medical man declared that a government that did not provide for such was not worthy the name of government, nor the State to be called civilized.

"19. It may be said that Parliament has by law — the Inebriate Act — enabled people to put their dipsomaniac friends into retreats; not so, the law was enacted, but neither the retreats nor the means. There are about 700 deaths annually in this colony from alcohol. What are the eighteen bedrooms at Northcote for such a state of things? And even these few are only for those who can afford to pay for them. The government receives £740,000 a year from spirits, opium, and tobacco, and spends not one shilling to save these unhappy victims. Melbourne City Council receives an enormous income annually from spirit licenses, so do other cities and towns, and they do not contribute one shilling to save the unhappy victims from lunacy and death.

"20. Under these circumstances, I may say nothing is being done. As for the government sending these unfortunate persons to a lunatic asylum, it is highly improper, so long as they are not lunatics in intellect, and if they are so, the government are more culpable in not providing a place for them before their reason was gone. The imperial government refuses to license any house for inebriates that

takes in lunatics. Dr. Paley condemned it; so does every medical man, but they sign certificates, as there is no retreat to send them to.

"21. As to this Retreat, there being no funds from government or the public, the number of patients must continue to be small; five times as many apply as can be admitted, and if they knew that they would or could be admitted for a small amount, twenty times as many would apply. I have every reason to be satisfied with the majority of those who remain in the Retreat for a reasonable time; but occasionally I have a patient, among the women as well as the men, but much more frequently among the men, whom I am obliged to expel on account of their bad disposition in rebelling against discipline. Dr. Hearn applied to the Upper House last session for such power as exists in England and South Australia to enable me to enforce discipline, but was refused: there remains only expulsion, which is no punishment or corrective to such.

"*Summary.*

"(*a*) The Parliament should minimize the evil by lessening the number of hotels, and enacting proper licensing laws, and depriving cities, towns, and boroughs of any share of the license fees.

"(*b*) To establish a large retreat, into which persons not able to pay more than a small amount, or nothing, would be admitted under proper regulations, and compelled to work; deprivation of alcohol and tobacco, and being compelled to work, would keep out loafers. This would be an ineffable boon to many an unhappy wife and husband in every town in Victoria.

"(*c*) Support such establishment from license fees, etc.; enact a short act suitable for it, and to remove certain patients from A to retreat B; and forbid any but lunatics to be admitted to lunatic asylums.

"(*d*) Grant a portion of the license fees to such semi-private retreats as this for those indicated in section 6. The above is the result of my experience; it would meet a crying evil, and there is no other way to do it."

THE INDISCRIMINATE USE OF ALCOHOL AND ITS RELATION TO LIFE INSURANCE.

By R. L. Faithful, M.D., L.R.C.P., Sydney, N. S. W.

The habitual or daily use of alcoholic stimulants is one which needs especial investigation by the medical examiner, as directly or indirectly it tends to shorten life more certainly than any known disease. In endeavoring to elicit these facts I am accustomed to ask the following questions and probe them deeply:

(*a*) Do you use stimulants of any kind daily or habitually?

(*b*) What kind do you use, and in what quantity?

(*c*) At what time, or times of the day, do you take them?

(*d*) Are you in the habit of making a good breakfast?

(*e*) Do you suffer from sleeplessness or restlessness at night, or diarrhœa in the early morning?

(*f*) Are you subject to slight headaches, or any kind of nervous attacks?

With every care it is at times most difficult to arrive at a definite conclusion. In such cases I think it is best to give the benefit of the doubt to the company, and decline or postpone the case. The applicant may be posted, and very frequently is, by the soliciting agent as to how he should answer such questions, especially so if upon a previous occasion he has been postponed by some other company. He may be honest, but, thinking such questioning is so much nonsense, is likely to answer: "Oh, I take a drink whenever I want it"; or, being dishonest, he may say, "Occasionally only," and these occasions may be pretty frequent; or he may have been a free drinker previously, but at the time of the examination may be a teetotaler *pro tem.*, and his answer will then be, "Not at all," or, "I don't take it," and beyond this point it is difficult to elicit more from him.

Again, he may be a periodical drinker, or a sly drinker, and drink by himself alone at his own house or some out-of-the-way public house; or he may be an habitual tippler and still present no especial signs of alcoholism in its early stage beyond the smell of liquor, for which he accounts as just

having met an old friend, or some such excuse. With carefulness, and being on guard, the diagnosis of doubtful temperate habits can generally be arrived at. There is usually an abnormal dilatation of the pupils, a slight watery suffusion of the eyes, with more or less conjunctural hyperæmia, an irritability of the temper, with a certain amount of hesitation in answering questions, an indescribable restlessness, the face may or may not present a rosaceous condition, there is usually a slight muscular tremor, frequently felt by the fingers while examining the pulse.

The tongue will be more or less furred, or it may be glazed and red. The breath is peculiarly heavy, and has an unmistakable odor, and frequently an indistinct odor of alcohol with perspiration mixed, will pervade the person. Alcoholics frequently suffer from vague pains in the wrists, ankles, and shoulders, which they attribute to rheumatism, and a stiffness of the limbs, which are at times unsteady and may shake. This is most noticeable early in the morning, and is, for a time at least, removed by a meal or a glass of alcoholic stimulants.

The kind of alcohol taken really differs little; it is the quantity which is consumed that does the harm. Certainly we know that some individuals seem almost proof, so to speak, against spirits, and may drink freely for years and appear none the worse. In others it acts as a potent poison in even small quantities — this latter is probably most noticeable is women. Alcoholic indulgence is credited with causing a host of disorders — catarrhal dyspepsia, sclerosis of the liver, the typical granular kidney, fatty degeneration of the heart and blood vessels, a predisposition to acute pulmonary troubles and tuberculosis (the latter probably due to tissue changes which cause a lowered vitality of the system in general), and this allows the development and propagation of the baccilli tuberculi, various chronic congestions, and a vitiated condition generally of the body. Amongst the nervous troubles may be mentioned insomnia (which is always marked), delirium tremens, epileptic attacks, paralysis, insanity, and similar conditions. — *Medical Examiner.*

CHRONIC CAFFEISM.

Some weeks before his death, M. Charcot was consulted by a Paris merchant regarding a peculiar condition of mind and nerves that afflicted himself and family, and which also seemed to be transmitted to any new domestic who resided with the family. The family were all extremely irritable, so much so that hardly a meal passed without some explosion and a scene. The least provocation was the signal for an outbreak; the father would storm, the mother would scold, and the children would cry. A general hysteria seemed to control the whole family. The father was afflicted with tremors and involuntary gesticulations and was extremely irritable; the mother was subject to sudden attacks of violent migraine and was terribly hyperesthetic — a sudden noise, a too bright light, or any sudden impression would at times bring on attacks of general pain; the daughters were hypochondriacal and hysterical and the boys were emaciated and nervous, and the youngest child — a little girl of eight years — was suffering from incoherent muscular movements and chorea.

In the middle ages the family would have been termed bewitched, and benedictions and exorcisms resorted to for their relief, and several accused sorcerers or witches would in all probability have ended their lives on the wheel, at the stake, or by drowning in a vat. An inquiry into the condition of the home developed the fact that the father was a coffee manufacturer and merchant, being extensively engaged in the roasting and packing of coffee and in the manufacture of coffee extracts and essences. The family lived in apartments above the factory and stores, and the furniture, clothing and rooms were all well impregnated with a strong coffee odor. A removal to the pure air of the seashore and a change of habitation on the return, greatly restored the family Charcot diagnosing the condition as one of chronic caffeism.— *National Popular Review.*

BEER A CAUSE OF HYPERTROPHY OF THE HEART.

Dr. Laache of Christiania, in an address before the International Congress at Rome, called particular attention to the close relation between beer-drinking and hypertrophy of the heart.

Alcohol in the form of beer will cause a pure idiopathic hypertrophy and is always a prominent factor in the causations of these affections. The plethora provoked by the immoderate injection of beer, and the augmentation of the blood-pressure resulting, together with the poisonous action on the heart muscles, are explanations of the increase of cardiac affections and a mortality equal to tuberculosis in the city of Munich and other towns where beer is used freely. This has reached a prominence, so as to be called a beer-heart, and is followed by fatty degeneration; secondary valvular disease, due to endocarditis. Draymen and others who work in the breweries rarely pass the forty-fifth year without indications of dilatation and hypertrophy of the heart.

In many cases of *post-mortem* the valves are healthy, and no signs of marked disease, only the enormous size of the heart is marked, weighing from eighteen to twenty-five ounces.

Dr. Laache thinks the great prevalence of cardiac disease in the Scandinavian countries are owing to alcoholism and heredity and muscular overstrain. He thinks that sedentary living, over-feeding, smoking, and various other excesses are also prominent factors with spirits. The use of spirits seems to be considered very active as a cause, both exciting and predisposing, and particularly the lighter forms, as in beer and wines. The strain of alcohol increasing the heart's action for a time, and the following reaction, sooner or later, is followed by some condition of exhaustion which takes on disease that is chronic and progressive.

STATISTICS ON THE RELATION OF INEBRIETY TO CRIME.

The State of Massachusetts is now alive to the importance of knowing the exact relation of inebriety to crime causes, that is, the extent to which it enters into the primary cause. This compilation of statistics is now under way, and in charge of Chief Horace G. Wadlin of the Bureau of Statistics of Labor, under the provisions of chapter 332, Acts of 1894. The statistics will be gathered from every penal and reformatory institution in the State.

It is regarded as unfortunate by some that an effort is not also made to ascertain the relation of other habits, such as morphine eating, opium smoking, etc., to the causes of crime.

Slips have been prepared on which various questions are printed to be asked the different inmates of institutions, such as name, age, occupation, date of commitment, nature of crime, place where crime was committed, sentence and residence of criminal, place of birth of criminal and of parents, whether citizen or alien, and language spoken.

After these preparatory questions come these more direct ones:

"Was the criminal under the influence of liquor at the time the crime was committed?"

"Was the criminal sober or in liquor when he formed the intent to commit the crime?"

"Did the intemperate habits of the criminal lead to a condition which induced the crime?"

"Did the intemperate habits of others lead the criminal to a condition which induced the crime?"

The investigator will pry into the drinking habits of criminals and also of parents, whether a light drinker or a heavy drinker, an occasional drinker or a protracted drinker. The kind of liquor drank by the criminal and the parents, such as whether whisky, light beers, malted liquors or distilled liquors, etc.

It is optional with the prisoners whether they answer the questions or not, and it might be added that female

prisoners will be questioned as well as males. The statistics secured will be extremely valuable, and the bringing out of the hereditary taint of the liquor habit will be of inestimable worth. The compilation will not be ready, probably, until next year.

PROTOPLASM AND ITS MODIFICATION BY LIFE. Dr. DANILEWSKI of St. Petersburg, in a paper read at the Medical Congress at Rome, remarks as follows:

"Albumin being the principal constituent of the protoplasmic complex, and in view of the differences in albuminous substances in different parts and of the forms of protoplasm, it can be understood that the quality of the albumin determines the kind and character of the vital activity, and that the phenomena of life depend, on the one hand, on the fundamental properties and the nature of the functions of the protoplasm, and on the other, on the chemical constitution of the albumin. The albuminous molecule is itself a chemical complex consisting of atomic groups which form series constructed uniformly, but yet distinct, one from the other. Certain albuminoid substances are particularly rich in a certain kind of series; others contain none of certain series. The richer the albuminous molecule is in atomic groups of various kinds, the wider and freer is the share it takes in the vital phenomena of the protoplasm; the more uniform the quality of the groups in the albuminous molecule the narrower and more restricted is the biological role of the latter. The incomplete albuminous molecules in superior organisms are derived from complete molecules. In the lower organisms there are no complete molecules analogous to the albuminous molecules of the superior protoplasm.

"A comparative study of the albumin of superior and lower organisms leads to the conclusion that in nature the albuminous substances are not formed all at once, and that the complete albuminous molecule of the superior protoplasm is the result of a philogenetic development parallel to the

perfecting of organic forms on earth. In this development the albuminous molecule displays the faculty of accommodation. The external causes which bring about its complexity do not act directly on the albuminous molecule, but on the protoplasmic complex, and the latter being the defender of the albuminous molecule, and at the same time the transmitter of external influences. The new atomic groups which finally have entered into the constitution of the albumin must, at the commencement of development, have been constituent parts of the protoplasmic complex, but their existence not being of a lasting character these new groups acquire permanent and biotic character in becoming a constituent part of the albuminous molecule.

"Protoplasm may differentiate itself into two distinct forms — namely, hyaline and 'stromic.' The former first receives the shock of external actions and in like manner its complex is first reconstituted under their influence, and its albumin is first invaded by the new atomic groups, while the stromic protoplasm follows the hyaline step by step in its development. The hyaline protoplasm keeps more feebly that which it acquires, while stromic protoplasm assimilates less readily, but keeps more persistently what it has acquired. The phenomena of heredity are explained by close connections gradually formed between these two forms of protoplasm and the external world.

"Civilized man uses alcohol so extensively, and has done so for so long, that one may with certainty affirm the existence of an alcoholized protoplasm in drunkards just as one finds morphinized protoplasm in cases of chronic intoxication with morphine. The existence of arsenic in the protoplasmic complex of arsenic eaters, consequent on the fact that they are incapable of subsisting normally without that element, can no longer be questioned. In these three facts we have the proof that man by introducing into his body stimulant, narcotic and alterative substances even to excess, becomes accustomed thereto to such a degree that without them his organism is not at peace. Hence, it follows that the complex of protoplasm and albumin is adaptable, that it is not incapa-

ble of being disturbed in its fundamental constitution and in its properties, and that it is reconstructed with difficulty. This, however, is not to be taken as meaning that such a thing never happens, and it does so with greater readiness in a regressive than in a progressive direction."

INEBRIETY OR NARCOMANIA, ITS ETIOLOGY, PATHOLOGY, TREATMENT, AND JURISPRUDENCE; By Norman Kerr, M.D., F.L.S., President of the Society for the Study of Inebriety, etc., etc. Third Edition. London: H. K. Lewis, Publisher. 1894.

The third edition of this noted work will be welcomed by all as the latest and best grouping of facts up to the present of inebriety and its treatment. Many new chapters having been added, discussing the various medico-legal questions which are coming up with greater urgency every year. This book is so well known that no review would give the reader any clear views or new conception of its value. It may be said that no other work published extends over this new field of psychiatry so completely, and gives a better outline of topics that will be studied a century hence. The author, Dr. Kerr, has accomplished a most difficult task of separating the strange theories and delusions from the authentic facts; clearing away the mysticism and superstition of moral forces which have obscured inebriety so long. He has also brought into view the physical laws and forces which are traceable in cases of inebriety, and indicated the true lines of scientific research. The future student will always be grateful for this wide comprehensive work and be able to date his minute researches from a definite standpoint.

This work is also very gratifying in the distinct growth and evolution manifest, and the full recognition of the fact that this subject is not yet exhausted, that ample room exists for other works and other studies, made possible by this book. The type and arrangement of topics are excellent.

and Dr. Kerr is to be congratulated on having his work appear the third time in a new dress and form. Few modern authors in new fields and new topics of science have done work that was welcomed by their day and generation, or called for a third edition of their labors.

ON DOUBLE CONSCIOUSNESS. By Prof. Alfred Binet. Open Court Publishing Co., Chicago, Ill., 1894.

This exceedingly valuable work is the July number of *The Religion of Science Library*, and presents the obscure questions of double consciousness in its scientific aspect. The consciousness of hysterical persons, and the various relations of suggestions and states of health that enter into these strange conditions are presented in a graphic way. This phase of the brain is full of the most fascinating possibilities and facts that are not explainable, and yet they occur in our observation. The author has grasped many of these facts and discussed them very clearly and satisfactorily. He has made a permanent addition to the literature of this subject, and presented a little work that should be in the hands of every student of inebriety and the higher problems of the brain and its activities.

MICROBES AND MEN. By J. H. Orcut, M.D.

This volume is published by the author, and aims to give some leading facts of recent science, and their bearing on the drink problems. Chapter three gives the results of twenty-two experiments with alcohol on healthy temperate men. In each case the heart's action was lessened and the depressent action of alcohol was strikingly confirmed.

In chapter nine tobacco is studied by experiment and comparison, and the conclusion that it is equally dangerous in a degree with alcohol is reached. The chapters on the "Coming Man," "On Blood and Microbes," "On Headquarters," "The Heating Plant," contain many very startling

facts, presented in a very graphic way. The work is published at Owatonna, Minn. Price 50 cents in cloth, 25 cents in paper. It is well worth reading.

THE DISEASES OF THE WILL. By Dr. Ribot. Open Court Publishing Co., Chicago, Ill., 1894. Price, 75 cents.

This little work of one hundred and fifty pages presents in a very satisfactory way, "The Impairments of the Will," "The Defect of Impulse," "The Excess of Impulse," "The Impairments of Voluntary Attention," "The Realm of Caprices," "The Extinction of the Will."

The very clear popular style of discussing these obscure problems of evolution and dissolution of the will and the higher brain activities brings a certain fascination to these topics not found in other works. The terms of evolution and dissolution, so suggestive, are made clear as describing the brain processes of growth and decay. The problems of inebriety receive new light from many of these pages, and this work becomes essential as a guide in these frontier topics. The publishers deserve thanks for bringing out this work in this accessible form. We urge all our readers to procure a copy.

The *Review of Reviews* is one of those rare journals that contain a summary of everything new and historical in these days. It can be put aside in the library as a permanent history to be referred to in the future.

The Homiletic Review, Funk & Wagnall's, New York city is one of the leading theological reviews that comes to the professional man of all classes with rich suggestive thought that is stimulating, instructive, and eminently clear and broad. Such a journal has a great value in each family and among thinkers.

The *Popular Science Monthly* grows in value and interest and may be said to be without a rival in the world of periodical literature. No more attractive present could be made than a year's subscription to this journal.

Editorial.

PARALYSIS IN INEBRIETY.

Is there a special form of paralysis associated and caused by the use of alcohol? Authorities differ, but the common impression is that no distinct form of paralysis can be traced to spirits. Nasse, in 1870, pointed out cases that differed widely from the common types of general paralysis. They were called pseudo-paralysis, and did not attract much attention until in 1881, when Maseau described a class of cases differing from common general paralysis due to alcohol, lead, and other poisons. Since then these cases have come into some prominence and received full recognition. Some of the characteristics are as follows:

It begins in many cases after an attack of acute or profound stupor from excess of spirits, or some obscure apoplectiform or epileptiform convulsive attacks. In other cases it comes on gradually, where spirits are used continuously to excess. A low form of delirium and hallucinations are first noticed, exaltation with egotistical conceptions of power and capacity, extreme faith and generosity, often associated with the lowest sexual impulses. The mind becomes more and more uncertain and wavering; the muscles become more enfeebled, and the eyes show a strange inequality — one dilated and paretic in appearance, the other natural. At other times both eyes are immobile, dull, and cloudy, and their acuteness greatly diminished. The changes of the eye are very significant in this form of paralysis, and differs widely from general paralysis. States of dementia that change rapidly, depressing and lightening up alternately, are peculiar. The speech disturbances are not in the power to find words for expression, but to repress and select the right ones in the excessive flow of words. When the spirits are taken away a marked change in these symptoms follow, and

when taken again they return as before. This change of symptoms points to the nature of the paralysis and its toxic origin. When death follows, the usual symptoms of alcoholic poisoning are found in *post mortems*, such as arteriosclerosis and hemorrhagic pachymeningitis. These cases frequently suffer from sunstroke, and die from shock or injury suddenly. The paralysis after a time deepens into dementia and stupor, the delirium of exaltation continues up to the last, the paretic aspect of the eyes and the changes of the symptoms are the most prominent symptoms. Where great recklessness of conduct and sexual excesses are prominent in a case of inebriety, this form of paralysis may be expected. When this is found, the treatment should extend over two or three years, and be especially directed to prevent relapse in the use of spirits. Asylum treatment and the care of a special attendant are very important. This progressive degeneration can only be checked and held in abeyance by long, persistent hygienic treatment, and careful building up of all the organisms.

PSYCHICAL INEBRIETY.

Recently an eminent specialist asserted very positively, that a certain drink paroxysm in a well-known man was pure viciousness. He defended his position on the ground that this man had some social trouble and annoyance, and, from motives of malice, he rushed off and drank to stupor. He did not consider that this act was far more injurious to the man in every way than to any other member of his family. He reasoned from the fact that this person had been a total abstainer for two years, and had boasted that he never had any taste or craving for spirits, and could under any circumstances resist all temptations; also that a short time before he drank, he rebuked a client for drinking and spoke very earnestly of the danger and folly of giving way to the drink impulse. Shortly after this he went home to dinner, and found his wife had made some plans that were against his wishes. He seemed confused for a few moments, then

quietly left the house, went to a low hotel and drank to great excess for two days before he was found. He was brought home and was ill for some weeks. Six months later he left his office after a day of close study, and was found in a similar condition the next day, having drank to great excess. A third drink paroxysm, which came on without premonition, ended in acute pneumonia and death. The victim declared that these attacks were a willful giving way to the evil one in his heart. In the contest over the disposition of his property, the moral character of the drink paroxysms was affirmed, and the soundness and mental capacity of this man was pronounced as beyond question.

In another case a man who had drank during an army experience, but was noted for sobriety and mental clearness, had a similar drink paroxysm. He seemed in good health, was very cheerful and seemed to have perfect control of himself. Suddenly he discovered a defalcation in the accounts of a large mill of which he was president, and the defaulter, his son-in-law, had forged his name in many ways. He seemed confused for a short time, then directed what should be done, and quietly went over to a hotel in the vicinity and drank to stupor. This he continued for two days, then returned, and displayed unusual energy and clearness to repair the losses. He explained his drink period as willful and reckless, but always under his control. Some months after he disappeared as before, drinking to great excess for a time, then returning and explained his acts as the work of the evil spirit within him. These attacks increased in frequency and were prominent for their sudden unexpected onset, and equally sudden recovery, or ending after a certain period. This man was found dead from what was called cerebral hemorrhage, and the same question of soundness of mind was raised in the courts over his property; and the same conclusion of moral causation and wickedness was affirmed. A third case under my observation presented these symptoms. An active business man, fifty years of age, who had from boyhood at long intervals drank spirits, but never to excess, was considered a temperate man. Within

three years he had, without any cause or temptation, suddenly drank to continuous stupor for a day or more. One day, after two months' treatment, he quietly walked a half a mile to a low saloon and drank to stupor before he was discovered. This was repeated a few weeks later. He could give no explanation, and seemed to have no conception of what he did or any reason for doing it. These periods were confused blanks of memory, and only cleared up when he felt the influence of spirits and began to be intoxicated; then the situation and his folly occurred to him, but he seemed powerless to extricate himself. On one occasion he seemed in excellent spirits, and very clear mentally, and arranged for a meeting with his wife to settle some very satisfactory business. All at once he was seen to arrange his clothing with care and walk away with deliberation and thoughtfulness. He came back at the request of the attendent, but seemed silent and dazed. His face was pale and blanched, his eyes had a glazed expression, the heart beat was a hundred, the muscles of the face and body when sitting still seemed in a semi-paralyzed state. He did not answer any questions, but seemed distressed and suffering. In half an hour he seemed to awake and inquired if anything had happened. When told that he had been stopped from going away he expressed great satisfaction. He was given a bath and after a good night's sleep fully recovered. He could not remember or explain what he had thought or done in the past from a certain time. Twice these psychic states have been arrested, and about the same phenomena have followed, full restoration coming on after sleep. The same cloudy, dazed, half paralytic state appeared at each instance. I think these cases are good examples of psychic inebriety. In the two former cases this condition was unrecognized, in the latter it was seen and studied. This is confirmed in the history of many cases of irregular impulsive inebriety, where the person cannot tell why or for what reason he suddenly drank. He has no distinct memory of any reasoning or process of thought which occurred at this time. He will say that he did not think until after a certain time. When he found that he

was becoming intoxicated, then it occurred to him what he had done. In these cases sudden loss of consciousness is followed by the impulse to procure spirits, which is of a confused, indistinct character. If not opposed an automatic line of conduct will be followed, as to the place and manner of procuring spirits, which seems not unusual. When the person recovers this strange blank is unexplainable, except as a moral lapse, or the special work of a personal devil. His confused explanation is accepted as a fact. Cases where the drink craze comes on suddenly and without any clear premonition are always explained by the victims in terms of the most uncertain character. A study of these explanations alone points clearly to the psychic nature of the act, and indicate some sudden palsy of the higher centers that is closely allied to epilepsy. Psychical inebriety is not uncommon, and a study of the symptoms which precede and follow the drink craze will make this fact very clear to all observers.

CHARLATANISM — ITS SYMPTOMS.

In a very able editorial on Curing Inebriety, recently published in the *Medical and Surgical Reporter*, the following very clear review of the unmistakable symptoms of humbug remedies and frauds is given:

"A nostrum is a fraud wherewith fakirs fleece fools. No matter how greatly nostrums may vary in other respects, all bear the long ear-marks peculiar to the species — characteristics indeed which define the class. Briefly mentioned, these distinctive peculiarities, which are always offensively prominent, are: (*a*) A marvelous discovery, either as the crowning result of a life-long effort to better the condition of man, or as a special revelation to a devoted philanthropist, or, perchance, an observation accidently made during some profound scientific research in another direction. (*b*) A secret to be preserved at all hazards; a mystery so unfathomable as to escape the deepest investigation of modern scientific precision. The power is so potent that only the initiated can safely exercise it, and knowledge of it allowed

to the general public would bring untold devastation on humanity. (*c*) It is cordially condemned by the science which cannot appreciate it, and is reprobated by a bigoted medical profession which decries any departure from the ruts in which it runs. It is foolishness to the Greek and to the Jew a stumbling block. (*d*) It is an infallible specific for diseases that have hitherto been regarded incurable. This may be proved by testimonials from innumerable grateful ones, who, after years of illness and suffering all things at the hands of many physicians, have been cured by taking an indefinite amount of the specific, and are now rejoicing in absolutely perfect health, etc. (*e*) This mysterious power so providentially revealed to some hitherto obscure but worthy lover of his fellowmen, despite the ridicule and opposition of jealous and envious self-seekers, will be most generously and faithfully used for the healing of the nations by the self-sacrificing trustee — for a consideration.

"These characteristics never occur coincidentally save in a nostrum. And through them a nostrum should be as evident to the most credulous as it is to thoughtful educated people. *Verbum sat.*

"All the so-called 'cures' for inebriety present the above characteristics, but one cure in particular has been manipulated so skillfully that its notoriety has become universal, and it has developed into a commercial factor of some prominence. The reference is made to the 'Bi-chloride of Gold Cure.'"

DIMINISHING COAGULABILITY OF THE BLOOD AFTER THE USE OF ALCOHOL.

Prof. Wright of the Army Medical School at Netley, England, has recently published in the *British Medical Journal*, a study "Of the means of increasing and diminishing the coagulability of the blood." From various experiments it was found that calcium chloride increased the coagulability of the blood and often caused the arrest of hemorrhage. Carbonic gas was also found valuable, having much the same effect as calcium chloride. He found that

soluble salts, of citric tartaric. malic or oxalic salts. as well as the acids themselves, had a very powerful effect in diminishing the coagulability of the blood. He confirmed the experiments of Vierordt that alcohol diminished the power of the blood to form a clot. or coagulate.

In an experiment on himself he found the coagulation time under certain circumstances to be six minutes. After taking a half a pint of champagne the time increased to eight minutes. This increased in two hours to nearly ten minutes. In a second experiment on himself the natural time was four minutes. After using a small per cent. of alcohol this increased to five minutes and a half. More spirits increased this time rapidly. In a third experiment on an officer the same results followed. The natural coagulatory time of the blood was increased. The experiments were on blood drawn from the body under exactly the same conditions of time, temperature, and diet. These and other experiments of Vierordt are of much significance in the question of the use of spirits in actual and threatened hemorrhage. Persons found in the stage of collapse from bleeding should never be given any form of spirits, for the reason that the increased heart's action increases the flow and force of the blood current, and the additional reason of diminishing the natural coagulability of the blood. This latter fact can be demonstrated in many ways by experiment and does not rest on theory.

THE GOVERNOR'S PARDONING POWER.

A rather remarkable case has just been decided by Judge Rumsey of the New York Supreme Court at Auburn. James Lysaight of Rochester was sentenced to thirteen years' imprisonment, but after having served over three and a half years he was pardoned last winter by the Governor on condition that he would not drink any intoxicating liquors during the period for which he was originally sentenced. If he did drink he was to forfeit his freedom and also the time that might stand to his credit for good conduct.

He got drunk last summer and he was taken back to prison to serve out the other nine years and a half. Suit was brought to secure his release on the ground, first, that the Governor had no authority of inserting in the pardon a condition depriving him of his constitutional right to take a drink; second, that he was not told the conditions of the pardon when he was released; and, third, that the taking away from him the time earned by good behavior was unjust.

The decision is positively against the man on the first two grounds, while the third is dismissed as not relevant at the present time. It is the law, therefore, in this State until the Court of Appeals rules otherwise, that the Executive can make it a condition of a pardon that the recipient shall keep absolutely sober for at least as long a period as he was originally sentenced.

STROPHANTHUS IN DIPSOMANIA. — It would seem, to judge by some of Dr. Skvottzow's (*Sem. Med.*, 1894, xiv, p. 14) observations, that tincture of strophanthus may arrest an attack of dipsomania very quickly. This curious effect of the medicament in question was discovered accidentally by the author in a corpulent man of 63 years, who drank large quantities of brandy. As he exhibited feebleness and intermittence of pulse, the author considered it necessary, to relieve the embarrassed cardiac action, to prescribe a dose of seven drops of tincture of strophanthus three times a day. The patient was seized, after the first dose, with nausea, and experienced such a disgust for alcohol that he abandoned its use abruptly and definitely. The same effect is reported by the author in two other instances. Strophanthus always provoked a nauseous condition, soon followed by abundant perspiration — an effect not ordinarily observed in non-alcoholic persons. The abrupt suppression of alcohol is said not to have produced any delirium, which is contrary to the usual experience with drunkards.

THE action of anæsthetics is not understood, but it seems clear that the brain and spinal cord suffer from a period of agitation or irritation. The heart beats with greater rapidity, then slows up. The higher brain centers are overcome and finally suspended, but the lower centers of the brain and chord continue in a state of irritation, the controlling influences seem liberated, and disordered action follows. The dilatation of the pupils is always a hint of paralysis of the higher centers or stimulation of the lower. The use of chloroform and ether always disturbs the higher centers, either quieting them or leading to disordered action, but always breaking up their inco-ordination, unveiling secret functional activities that would never be seen before. Some forms of spirits act in this way. A wide field of research and new facts await discovery in this direction.

THE close of the *fourteenth volume* of the JOURNAL OF INEBRIETY brings the subject of our work to a very satisfactory point of view. Everywhere the facts of disease first urged in these pages are now fully recognized. The work of this JOURNAL has been far greater than ever anticipated by its founders. The organization of asylums for inebriates have not been as active as anticipated, but the facts of disease have been urged until they are conceded, and a literature has grown up in pamphlets and books, that has become a permanent addition to science. The criticism of specialists in nerve diseases, that much of the literature was a mere repetition of the statements of disease, was the result of their refusal to recognize this fact, and their continuous sneers of "cranks and exaggerations," as a large part of the literature. This has passed, and all this preliminary field is worked over, and now all the vast range of questions concerning inebriety in every direction comes into view. A great wave of public opinion is setting in towards the scientific study of this subject, by all classes. In this the JOURNAL will lead, as before.

ANY specifics or remedies that are supported by false statements are unworthy of any notice. If any one has made a discovery in medicine nothing is gained by exaggerations, falsehoods, and secrecy. No real truths have ever been presented to the world in this way. If any Gold Cure specifics have any merits and are veritable discoveries, why conceal them in a mass of deceptive statements? Why take the evidence of those who, of all others, are the least competent to decide? Why should the defenders of these cures be afraid of criticism, and shrink from appeal to the great masters of science, to men who have, by years of study and observation, become competent to decide on questions of this nature? The present endorsement or condemnation of these "cures" amounts to nothing; they will all be judged by time and the standards of truth from which there can be no appeal. The present masquerading of all the Gold Cure specifics in deception, dishonesty, and concealment, is at least not very promising for the future.

THE *Anti-Opiate Society*, organized in New York city to prevent the use and abuse of opium, choral, and cocaine has began a great work, and will have a wide field and no opposition from any source. The true field seems to be in gathering accurate statistics and disseminating this information among people who will read it with profit. The facts are far more valuable than any theories, and every physician will most willingly aid their efforts in this field.

IN the paper on Alcoholic Neuritis, which appears in this number of the JOURNAL, additional evidence is presented of the widespread degeneration from the use of spirits, and doubts as to the special localization of any lesions from alcohol. We are indebted to Dr. Ridge and the *Medical Pioneer* for this most suggestive paper.

Clinical Notes and Comments.

TEA AND COFFEE IN DIGESTION.

The custom of using the leaves or berries of certain varieties of plants which contain as their active principle substances resembling theine or caffein is almost universal. They undoubtedly possess a certain amount of stimulating power, and a hold upon the nerve structures which prevents a too rapid change of molecules in the animal economy until they have performed their proper function, but it has been shown by physiologists that their immediate effect upon the stomach is to retard digestion. It is known that the process of digestion in the stomach is due to the presence of hydrochloric acid and small amount of pepsin, both of which are secreted under the stimulating action of food. A distinguished German has experimented upon digesting food artificially in a medium of hydrochloric acid with the necessary amount of heat. Hard-boiled eggs were chopped and thrown into the acid liquid, and to this was added in different cases pure water, tea, and coffee. The percentage of albumen digested by pure acid was 94, with water 92, with tea 66, and with coffee 61. The question might arise, in the light of these experiments, if tea and coffee would not serve their legitimate purpose when taken alone, or with a cracker or a crust of bread, instead of a full meal.

In whatever way they are taken there is no doubt but what digestion is seriously impaired by their excessive daily use. A strong stomach with full vitality may suffer but little, while the delicate and sensitive should use them with great caution. Tea and coffee are just as liable to abuse as opium and alcoholic stimulants. — *Medical Times.*

ALCOHOLISM AND SCIENCE.

Among the subjects discussed by the Budapest International Health Congress was the question of alcoholism, measures for restricting the scourge being brought forward Among others M. Alglave set himself to show what were the real causes of alcoholism. While drunkenness was a passing phenomenon, he said, alcoholism was a profound and permanent modification of the organism which was the direct cause of half the crime, of more than half the cases of madness, and which entailed, by the diseases which it engendered, or which it complicated, a mortality much higher than any epidemic. M. Alglave showed that the cause of alcoholism lay much less in the quantity of alcohol absorbed than in the bad quality of the alcohol. Certain liquors had a toxic power much superior to that of pure ethylic alcohol. The experiments of Messrs. Dujardin-Beaumetz and Andigé showed that in order to kill an animal it was necessary to administer five times more ethylic alcohol than amylic alcohol. But in that case it was a question of the dose which killed immediately. In practice a much smaller dose was drunk, and the difference between the effects of amylic alcohol and of pure ethylic alcohol became then much more considerable. In short, pure ethylic alcohol boiling at 79 degrees evaporated by the lungs almost as soon as it was introduced into the stomach, and thus, so to speak, only traversed the organism. It was that which gave the drunkard's breath its characteristic odor. Amylic alcohol, on the contrary, only boiled at 140 degrees, so that at the temperature of the human body it scarcely evaporated at all. Once introduced into the organism it remained there and accumulated, the day's dose being added to those of the day previously, as those were added to anterior doses. However small the quantity taken daily, it finished by accumulating in the organism a considerable quantity of this toxic alcohol. From this, the genesis of alcoholism by amylic alcohol can be very well understood. M. Alglave also gave the results of the experiments now being carried on by his friend Dr. Feré, physician at the Salpétrière

Hospital. These experiments had relation to the action of the various alcohols on hens' eggs, and gave results as demonstrative as possible.

Without entering into detail on these numerous experiments, only the two extremes need be taken ; a certain number of eggs were submitted to the action of different alcohols before setting them for incubation, and then at the end of seventy-two hours they were opened, and the embryo chicks which they contained examined. It was then found that the embryo submitted to the action of pure ethylic alcohol usually underwent a certain delay in their evolution ; as to those subjected to the action of amylic alcohol, they presented every abnormal deformation more or less gravely, that is to say, they produced monsters, the major part of which were not even capable of living. In place of a fowl, imagine a human being, and the same phenomenon would arise. Men subjected to the action of ethylic alcohol also would produce nothing but monsters, that is, criminals and madmen, while pure amylic alcohol would not have the same influence, at least, no authority has yet asserted so. M. Alglave's previsions have, therefore, been again confirmed by Dr. Feré's experiments. The subjects submitted by the Salpétrière physician were examined with much interest by a large number of members of the congress by the aid of the microscope. Without discussing financial questions, M. Alglave afterwards gave a historic summary of the researches and applications he had made for about fifteen years in different European countries in order to propagate the theory of the alcohol monopoly. He set forth the position of the question in Germany, Switzerland, Austria-Hungary, Russia, Belgium, Italy, and France. He showed the working of the alcohol monopoly in Switzerland during the last four years, in Russia in some governments for a year, and also as being in preparation in other countries. In contradistinction to other hygienic reforms, which were usually very costly, this would save much money by saving many human lives. M. Alglave's views and propositions were heartily supported by doctors and hygienists of

the various countries represented at the congress, and on the proposition of M. Crocq, a professor of the Brussels University, they were adopted in the form of a resolution for the establishment of an alcohol monopoly and the suppression of the duty on wine, beer, cider, and other drinks slightly alcoholized, which M. Alglave long since proposed to call hygienic drinks.

WINE IN TABLETS.

A chemist of Algiers announces that he has invented a process for concentrating wine in tablets. Henceforth we are told, travelers will be able to carry great casks of wine in diminutive boxes. The ripe grapes are taken, the stalks removed, and the fruit pressed. The liquid is then pumped into a vacuum evaporator, heat is applied, and at a sufficient temperature vapor is produced, which is passed into a refrigerator. The result is a thick and syrupy liquor, which is afterwards mixed with the grape pulp and pips. The mixture is pressed into tablets, which, it is alleged, will keep indefinitely. To make wine it is only necessary to add the amount of water which has been evaporated. A good wine, of fine flavor, and from eight to nine degrees of alcoholic strength is obtained. The tablets contain about 80 per cent. of grape sugar. It is suggested that the tablets, mixed with a little water or diluted in soup maigre, would prove very nourishing as a ration when campaigning or traveling.

CASCARA SAGRADA FOR THE ELIMINATION OF URIC ACID.

It seems to be the accepted opinion that the pathology of uric acid is more a matter of defective elimination than of excessive formation. Osler says, "Certain symptoms arise in connection with defective food or tissue metabolism, more particularly of the nitrogenous elements; and this faulty metabolism, if long continued, may lead to gout, with uratic deposits in the joints, acute inflammations, and arterial and renal disease."

Not getting the desired results, I was led to drop all the so-called antilithics, and rely simply and solely upon a single remedy — Cascara Sagrada. Repeated trials have convinced me that the faulty metabolism is more quickly remedied with this drug alone than with any other or combinations.

Mrs. G., aged fifty-five, was for years subject to uric-acid storms, and without getting relief. I exhibited the aromatic fluid extract Cascara made by Parke, Davis & Co., in ten to fifteen-drop doses, two or three times daily as demanded, finally settling down to one single dose at the close of the day. The effect was not at once apparent, but within two weeks there was marked amelioration of the aggravated symptoms, and in four weeks the swollen joints had almost resumed a normal appearance, the soreness having nearly disappeared. At this writing (two months having elapsed), there is no complaint whatever, but the remedy is continued. No change was made in the diet, as I desired to more fully test the remedy, and am fully satisfied that the good results were due solely to the Cascara. I have tried other brands of Cascara, but they have not been satisfactory, hence I have come to regard the fluid extract above alluded to as the only one upon which I can confidently rely. It never fails, hence my preference. — *Doctor Walling, Medical and Surgical Reporter, July*, 1894.

WE have used Bromidia with the result that we keep it constantly on hand as a reliable sedative in all cases of insomnia and delirium arising from the abuse of alcohol or other stimulants.

EXTRACT OF CLAMS.

A preparation of clam juice, made by A. H. Bailey of Boston, Mass., has come into great prominence in the past few years. It is made with great care from soft shell clams, dug up on the Maine coast, and prepared on the spot under the most favorable conditions to keep. So popular has this extract become in hospitals, asylums, and hotels, as well as private families, that an immense business has grown up.

The value as a nutritive medicine in many cases of disturbed digestion and nervous debility is not to be compared to any other concentrated food offered for sale.

We have found it far superior to any other form of clam juice, and richer than any extract taken from the hard clams on the market. We most cordially say that a trial order of this extract will be followed by a demand for its use by both sick and well in all cases.

OPIATES NOT TO BE PREFERRED. — Pain, while being conservative, is often times unkind and must needs be modified and controlled. Remedies like morphia which tie up the secretions, are often objectionable. Antikamnia has no such unfavorable effects. As a reliever of neuralgia dependent upon whatever cause, and rheumatism and gout, it is of great value. In the intense pains ever present in the pelvic disturbances of women, cellulitis, pyosalpinx, *et al.*, it is to be preferred over opiates.

This drug, for convenience and accuracy of dosage, is now prescribed, to a great extent, in the tablet form. Patients should be instructed to crush the tablet before taking, thus assuring celerity.

The manufacturers have thrown around their product the security of specially protected packages, for both powder and tablets. And each tablet bears a monogram indicating its composition. Physicians should, therefore, insist on the presence of these conditions.

THF MEDICAL PROFESSION AND TEETOTALISM.

We take much interest in the action of medical men with regard to the evils of alcoholism. These can scarcely be exaggerated, though there is a wonderful power of resistance to them in some constitutions. It is not only that alcohol causes dieases of the gravest character directly — such as cirrhosis, alcohol, neuritis, gout, etc. — but that by the general misery and innutrition of families which it involves it favors all other degenerations. Bµt, though it is scarcely possible to overrate the harm done by alcohol, taken habitually, in any but moderate quantities, it is possible, we think, to exaggerate the importance of teetotalism. With every sympathy with Dr. Long Fox and other speakers at the annual medical breakfast of the National Temperance League in their sense of the evils of alcohol, and in their desire to see them abated, we demur to the proposition that medical men must be total abstainers before they can speak with effect on this question. We have a strong suspicion that a medical man who is known to be an ardent and a pledged teetotaler loses influence with a large number of persons. He is considered to be prejudiced, and his advice is too general and indiscriminate to weigh with individual patients. That there may be some drunkards who will abstain on condition that their medical attendants abstain may be true. Each medical man must judge of his duty in regard to that particular case, and must decide rather on high general than on medical principles what degree of self-sacrifice he will practice; but that is a very rare case. Extreme temperance and carefulness in the personal use of alcohol are binding duties on a medical man, as well as extreme care in the prescription of it. The drinking at odd times and for the mere sake of drinking should have no sanction either from the advice of the medical man or from his example. It is ruinous to the liver and nerves; yet it is amazing what numbers of young and experienced men may be seen any day taking alcohol in this manner. We are aware that some of our very best physicians take no alcohol, either for personal or for moral reasons. All honor

to them; but that is a different thing from pressing the point that only by individual teetotalism can the medical practitioner testify against excess. Moderation of habit and a fair share in the public denunciation of drunkenness and of all things in our laws of trade which encourage it well becomes the practitioner. Our more extreme friends should consider whether, by advocating more practicable measures, they cannot command a larger support from the medical profession in opposing a vice which, as Dr. Long Fox says, shortens the lives of some thousands of our fellow men more than do tuberculous disease and cancer combined.

The best sign in regard to the evil of intemperance is that our chief public men, spiritual and temporal, are feeling the urgency of it and are devising new experiments of legislation for its mitigation. Perhaps the most striking pronouncement in this direction is the letter of Mr. Gladstone to the Bishop of Chester which has just been published, expressing his faith in the principle of the Bishop's Bill and of the Gothenburg system — that of selling alcoholic liquors for the public profit only.

"The mere protection of numbers — the idol of parliament for the past twenty years — is, if pretending to the honor of a remedy, little better than an imposture." We note that Mr. Gladstone states that he is glad to see that Mr. Chamberlain (whose interest in this question is of long standing) is active in the same cause. It is no part of our duty, or our intention here, to go into detail or to express any signal preference for one remedy over another. All we propose to do is to say that, from a medical point of view the need for some remedy is urgent. While we regard total abstinence as a council of perfection, we are bound, as a profession, to endorse Mr. Gladstone's view that the present predicament of the country in this respect is miserable and contemptible, and a disgrace to it. If the Scandinavian nations have devised a method of reducing the consumption of spirits in less than twenty years from 6.77 litres per head to 3.19, it ought not to exceed the powers of English statesmanship to effect a similar reduction, both in the consumption of

spirits and beer. It has been the fashion lately in many quarters to ignore our drinking habits in discussing social and political questions, and to assume that all that is wanted to cure drunkenness is to ameliorate the physical condition of the people. But this is a mistake. The two evils must be simultaneously dealt with. A reduction in the consumption of alcohol would most powerfully facilitate an improvement in the domestic situation. As medical men we see, as no other class does see, the complicated workings of alcoholism both on the individual and on all related to him, not only in the present, but in hereditary ways, and it would be treason to our duty if we did not urge statesmen and all men of influence to devote attention to this deep vice of our British Constitution, which affects all parts of the United Kingdom, and not least those parts which are undoubtedly religious. Happily there are indications that the question is passing from the region of petty party politics to one of grave urgency, calling for the co-operation of all parties, all churches, and all professions. It is not necessary for us as a profession to wait for the action of the legislature. We have our own ways of enlightening the public on the subject, and we have our own responsibilities; but one of these responsibilities is to say that few steps could be taken which would do more to elevate legislation in the eyes of the people than for political leaders to forget for a time their party differences, and consult and co-operate gravely for the settlement of this question. — *Lancet.*

PHENOMENAL CASE.

Dr. Lett, the well-known Superintendent of Homewood Retreat, Guelph, Canada, reports a case where both morphine and cocaine were taken. Of the former, sixty grains, and of cocaine seventy grains daily, in all one hundred and thirty-grains of cocaine and morphine were used hypodermatically every day. These two drugs in such enormous doses are rarely taken together; usually large doses of one and small doses of the other are common. A history of this case would be of great interest

THE ALCOHOLIC QUESTION PRACTICALLY.

Recently a chairman of a hospital board refused to confirm the appointment of a noted physician on the staff of the hospital because it was found that he was a moderate and continuous drinker. He gave as a reason that his pecuniary interests had always suffered when placed in the care of drinkers, and he could not consistently vote to give larger and more sacred responsibilities to the care of similar persons.

This sentiment distinctly outlines the growing conviction in all business circles, outside of moral considerations or theories. Railroad companies have become most prominent in refusing to employ moderate drinkers. Life insurance companies are becoming more and more exacting in insuring such persons, or refusing to take risks on their lives. Thus capital everywhere is regarding moderate drinking in positions of trust as perilous. A wealthy man, who was a wine drinker and invalid from excesses, refused to employ an excellent physician who was urged as a medical attendant for a round-the-world trip, because he was a moderate or occasional drinker. He said that he could never depend on any one who had the same weakness. The old-time legend of a drinking physician being superior to his temperate brother is not accepted as a fact in business circles, for the simple reason that all experience points out the uncertainty and weakness of a drinking man, and general incompetency in places of responsibility and trust.

Within a few years a great change has taken place in all the Eastern cities concerning the competency of men who use spirits. The manufacturer, the jobber, and retailer, and even the distiller, brewer, and retail liquor dealer, demand total abstainers to do their work. This is seen in the Business Men's Moderation Society, where pledges are taken not to use spirits or any strong drinks until after business hours. On the great ocean steamers total abstinence was the rule when at sea, but recently several large companies have enforced rigid laws making it part of the officer's qualifications that he be a total abstainer. Should he be seen drinking

anywhere on duty, or off duty, he is to be discharged at once. The mayor of an Eastern city announced to the common council in his first message that he would oppose every nomination of officials who were not total abstainers. He also said that for years he had refused to employ drinking men in his business, and the public was entitled to the same careful service. These examples are increasing yearly in all parts of the country, and are above all sentiment, and are simply the dictates of bitter experiences and facts that have only one meaning. Saloon men recognize this and apply it to their business, giving preference and boasting of the temperance habits of their bar-keepers.

This is a phase of the great drink question that is being solved quietly, and along new lines and from different points of view. The possible danger from the use of alcohol as a beverage is a serious matter to the business man. He must protect and secure his capital by every means. If a class of men with certain habits are found dangerous and uncertain, he cannot risk his interests with them. On this principle he must act, no matter who these men are or what their capacity may be. Life insurance companies find the moderate drinker a more dangerous risk, and his mortality greater, hence refuse to insure him at ordinary rates, or at all. Mercantile agencies find that business conducted by moderate drinkers is more precarious and followed by a greater number of failures, hence rate such firms low as to responsibility. Railroad companies find that accidents and losses increase under the care of moderate drinkers; that the income and stability of the road are diminished, compared with the same service by total abstainers. Capital everywhere discovers by figures and statistics, which have no other meaning, that under the care and control of moderate or excessive drinkers the losses and perils are enhanced and the uncertainty and risks of business men are increased. Merchants find their greatest perils to come from clerks and creditors who use spirits, hence become advocates of total abstinence as a pure business matter.

The medical side to this subject is projecting itself into

every neighborhood, and to the attention of every thoughtful physician, particularly in the questions of diagnosis and prognosis. The unexpected fatalities and very grave conditions which suddenly occur in apparently simple cases are baffling to ordinary therapeutic art, and only clear when a history of moderate drinking is ascertained. This class of cases, when ill, present a group of symptoms that are often misleading, and such cases die more rapidly than others, and from insignificant causes. Medico-legally, the eccentricities of wills and conduct, and the strange acts, unusual emotional and intellectual changes, are all accounted for when the drinking habits of the case are known.

This is the practical side that physicians should seek to educate the public to understand. The merchant and business man are astonished that his experience is seldom endorsed and is not explained by the medical profession. Unfortunately, the profession are singularly indifferent to the great principles of the drink question, or endorse the various efforts made by moralists, who approach the subject entirely from the ethical side. The practical side, from the basis of facts and experience, should be studied, and then the conclusions will be along the line of laws. At present the business world is approaching this side far more rapidly than scientific men.— *Editorial in Lancet-Clinic, Cincinnati.*

SIXTY-FIVE great trunk lines of railroad have made laws forbidding their employes to enter saloons or drink spirits of any kind while on duty. Ten of these railroads have a rule that all men working for them who frequent saloons are to be discharged at once, without question.

A MOVEMENT has begun against the Pullman and Wagner cars to prevent them from selling beer and spirits while in service. It is claimed that on some trains this service is the same as a second-class saloon, and is a source of much complaint to many travelers.

TWENTY-FOUR pages are required to give a summary of the literature of the year of Inebriety-Morphinism and other kindred diseases in the annual of the *Universal Medical Sciences* for 1894.

INTOXICATION DOES NOT EXCLUDE A CONFESSION.— The Court of Criminal Appeals of Texas holds, in the recently decided case of White *vs.* State (25 *S. W. Rep.*, 784), that the intoxication of a person accused of committing a crime at the time he may have made a confession with regard thereto, is a matter for the jury to consider in weighing the testimony, and will tend to affect the weight of such confession, but will not exclude such confession from being put in evidence.

DRUNKENNESS SOCIALLY INDUCED AND TAKEN ADVANTAGE OF IS NO DEFENSE TO CRIME. — Drunkenness is not an excuse for crime unless the same was occasioned by the fraud, artifice, or contrivance of another or others, for the purpose of having a crime perpetrated. Thus declares the Supreme Court of Georgia in the case of McCook *vs.* State (17 *S. E. Rep.*, 1,019). Consequently, if one or more persons give whisky to another, "in a social way, and with no view or purpose at the time" to induce him to commit a crime, and afterwards, while he is so drunk that he knows not what he does, procure him to commit a crime, he would be legally responsible, and subject to conviction for the same.— *Lancet-Clinic.*

can compete with them in quality and price. We urge our readers to write them what they want, and receive their catalogue, with prices.

Dr. Abbott of Ravenswood, Chicago, has perfected a process of concentrated granules, in which drugs of unpleasant taste can be given in a most palatable form.

Fellows's Hypophosphites requires no praise to those who have used it. It will bear the test of practical examination and use, as a tonic and nerve stimulant, beyond all question. In the treatment of mental and nervous exhaustion it is without a rival.

Hosford's Acid Phosphate has become a permanent remedy in many cases of brain and nerve exhaustion, and no other remedy has stood the test of critical use so completely.

Trional and *Sulfonal* are two drugs that have become invaluable in the treatment of the disorders which follow the removal of alcohol and opium W. H. Schieffelin & Co. of New York have the most reliable preparations of these drugs on the market. The demand for these new remedies are increasing wherever they are tried, and their value cannot be overestimated.

It is a pleasure to call renewed attention to the several asylums and homes which are advertised in our pages. We are personally acquainted with all these places, and their management, and can say that they represent the best asylums in this country, and also the most practical advanced students in these branches of medicine.

The well-known firm of *W. H. Schieffelin Company* of New York city has recently passed into the second century of their existence, and issued a pleasant monograph of the history of the, rise and progress of the firm. We extend warm congratulations, and have no doubt the next century will find the same firm still at work in the newer, larger pharmacy that is to come.

Dr. Sparks's Home in Brooklyn, New York,for women inebriates, is an excellent place for special personal care and medical attention so essential in these cases. Write for a circular.

THE *Medical Temperance Quarterly*, under the care of Dr. Kellogg, of Battle Creek, Michigan, is the only journal in this country that discusses alcohol and its physiological effects on the body from a purely scientific side. It deserves the warmest support from all physicians.

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. XVI, 1894.

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

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

INDEX TO VOL. XVI, 1894.

A.

	PAGE.
Alcoholic Question from a Medical Point of View,	9
Arnold, Dr. E. F.,	36
Alcohol as a Cause of Unchastity,	51
Alcoholic Neuritis,	57
Alcoholism in France,	59
Alcoholic Paralysis,	61
Annual of Medical Sciences,	63
Automatism in Dipsomania,	70
Alcohol in Inebriety,	95
Abuse of Alcohol in Mental Diseases,	155
Alcohol and Criminal Law,	167
Accidents from Alcohol,	174
Auto-intoxication in Disease,	179
Alcoholic Coma — Diagnosis of Persons Found in the Street, etc.,	205
Alcoholism and Beer,	279
Alcoholic Inebriety,	290
Asylums, Private, and their Difficulties,	325

B.

British Medical Association,	47
Bromide of Potassium,	64
Beer Statistics,	67
Beer a Cause of Hypertrophy of the Heart,	368

C.

Crothers, Dr. T. D.,	41, 71–81, 185–197, 248, 282–289, 325, 375–383
Caffeine Contra-indicated in Alcoholism,	68
Criticisms,	81
Cocaine, Dangers of,	82
Cheever, Dr. Geo. W.,	138
Climacteric Inebriety,	158
Chloral, Deaths from,	169
Classification of Inebriety,	192
Cases in Station Houses,	194
Cathell, Dr. W. T.,	231
Children of Drinkers,	271
Cocaine, Discussion of,	272

PAGE.

Contribution to the Morbid Anatomy of so-called "Polyneuritis Alcoholica," 299
Campbell, Dr. W. A., ... 299
Case of Paraldehyde Habit, ... 333
Charlatanism — Its Symptoms, ... 379
Chronic Caffeeism, ... 367

D.

Diseases of the Nervous System, ... 62
Delirium Tremens, ... 123, 138
Degeneration and Organic Defects, ... 161
Drunkards, Moderate, ... 163
Drink as the Cause of Insanity, ... 172
Diseases of Personality, ... 181
Depopulated by Opium, ... 199
Drinking in England, ... 230
Day, Dr. Albert, ... 254, 340
Diminishing Coagulability of the Blood, ... 380

E.

Evolution in Reality, ... 78
Evidence of Inebriety, ... 185
Elkins, Dr. F. A., ... 333

F.

Foxboro Asylum, ... 191
Fourteenth volume, Close of the, ... 383

G.

Growth of Practical Efforts to Found and Conduct Inebriate Asylums, ... 340
Governor's Pardoning Power, The, ... 381

H.

Holbrook, Dr. M. L., ... 51
Home for Inebriates at San Francisco, ... 261
Hypertrophy of the Heart, Beer a Cause of, ... 368

I.

Inebriety from a Medical Standpoint, ... 36
Inebriate Sanitariums, ... 67
Inebriety Cures, ... 159
Inebriety and Crime, ... 162
Insurance of Opium Users, ... 177

PAGE.

Inebriety in Paris, ... 177
Inebriety, A Study of, ... 243
Intent and Crime, ... 273
Inebriety, ... 279
Inebriety and Syphilis, ... 282
Indiscriminate Use of Alcohol, etc., ... 365
Inebriety, Paralysis in, ... 375

J.

Journal in 1894, ... 71
Journal, Close of the Fourteenth Volume, . . . 383

K.

Kerr, Dr. Norman, ... 1, 48
Kerosene in Inebriety, ... 70
Kings County Inebriate Home, ... 278

L.

Legal Recognition of Diseased Inebriate Conditions, . . 1
Legal Relations of Inebriety, and Errors of Treatment, . . 30
Lectures on Science of Thought, ... 181
Liquor Habit Cures, ... 258

M.

McConnell, Dr. J. B., ... 17
Medical Jurisprudence of Insanity, ... 60
Mad, Mad World, ... 79
Morphia, Places for Using It, ... 84
Morphinism in the Nobility, ... 89
Month's Record, the, ... 100
Moderate Drunkards, ... 163
McCarthy, Dr., ... 189, 243
Morphinism, ... 198
Mason, Dr. L. D., ... 205, 254
Medical Temperance Association, ... 275

N.

Northcote Retreat for Inebriates, ... 356

O.

Opium Commission, ... 75
Opium Fields in China, ... 90
Opium Inquiries, ... 105
Opium Inebriety, ... 310

P.

	PAGE.
Proposed Legislation for Inebriates in England,	48
Prize Essays,	69
Public Meetings and Moral Suasion in Inebriety,	72
Punishment for Drunkenness,	87
Pringle, Dr. Robert,	105
Paraldehyde Habit,	157, 333
Psychology in Mental Diseases,	180
Psychical Inebriety,	186, 376
Personal Liberty,	196
Prohibitory Laws,	248
Polyneuritis Alcoholica, contributions to so-called,	299
Private Asylums and their Difficulties,	325
Paralysis in Inebriety,	375

R.

Read, Dr. John G.,	30
Relation of Inebriety to Crime, Statistics on,	369

S.

Strumpell, Prof. A.,	9
Strychnine in Alcoholism,	17
Sketch of Dr. Thomas Lee Wright,	41
Statistics,	50
Solutions of Some Questions,	76
Stuckey, Dr. T. H.,	157
Sanitation Practically,	270
Saloon Statistics,	272
Sanitas Grape Food,	295

T.

Treatment of Inebriety,	55
Treatment of Inebriety in England,	91
Turkish Bath and Gymnasium,	92
Twitchell, Dr. Geo. B.,	123
Tobacco, its Effects on the Nose and Throat,	231
Temperance in all Nations,	280
Tobacco Deafness,	292
Trional, Therapeutics of,	294

U.

Use of Alcohol and its relation to Life Insurance,	365

W.

Weismannism — an Examination,	63
Walnut Lodge Hospital,	264
Washingtonian Home,	275
Waugh, Dr. W. F.,	310

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 Morphia. $3.25.

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

Charcot, Spinal Cord. $1.75.

PRODUCTS
OF THE
FARBENFABRIKEN
VORM
Friedr Bayer & Co

1893

Aristol
Salophen
Europhen
Phenacetine=Bayer
Piperazine=Bayer
Sulfonal=Bayer
Losophan
Trional

For Pamphlets Address

W H Schieffelin & Co
New York
Sole Agents and Sole Licensees for the United States

ARISTOL. — THIS TOPICAL REMEDY is widely employed as a convenient, agreeable and effective dressing in major and minor surgery, dentistry, inflammatory conditions of the eye, ear, nose and genitalia, ulcerations, burns and bed-sores. Aristol adheres to wounds and membranes.

ARISTOL may be used dry, or in 10 per cent. ointments, oils, collodions, or ethereal solutions. *Supplied by us in ounces only.*

SALOPHEN.—IN ACUTE RHEUMATISM, Salophen has been strongly recommended as the most energetic and eligible remedy now employed. Salophen is a salicylic-phenol derivative, so bonded, chemically, as to render it innocuous.

SALOPHEN is supplied in *ounces, tablets and pills.* It may be given with equal parts of Phenacetine. (*See Pill List "W. H. S. & Co."*)

EUROPHEN.—AS A COMPLETE SUBSTITUTE for IODOFORM no remedy is comparable to Europhen. It is the best known cicatrisant for open wounds, and catarrhal or ulcerative states, whether or not specific; and it has a special value in cavital lesions.

EUROPHEN has [illegible] more covering power than Iodoform and adheres to denuded surfaces. It is supplied in *ounces.*

PHENACETINE-BAYER.—THIS REMEDY has fully justified the opinions of medical men touching its high value in therapeutics. It is indicated in all acute, inflammatory, febrile conditions, and all forms of pain. It is the safest and most active of the antipyretics and analgesics.

PHENACETINE is supplied in *ounces, tablets* and *pills* [illegible] combinations with Salophen. See [illegible]

SULFONAL-BAYER.—FOR INSOMNIA and NEUROSES the safest and most decided remedy is Sulfonal, since it induces physiological sleep, free from narcosis and sequelæ. It is the most reliable of hypnotics, and is endorsed by neurologists and general practitioners.

SULFONAL is best exhibited in boiling water allowed to cool to the drinking point. *Supplied in ounces, tablets and pills.*

LOSOPHAN. — TRIIODOCRESOL or Losophan indicated in MYCOTIC, FUNGOID or PARASITIC diseases. It has given excellent results in mycosis, pityriasis, eczema, prurigo, sycosis barbæ, the epizoa, acne and pediculosis.

LOSOPHAN is employed in 1 to 10 per cent. solutions or ointments. Eligible formulæ are given in our circular. *Supplied in ounces.*

PIPERAZINE-BAYER.—FOR LITHIASIS, acute and chronic gout, and uric acid dyscrasia, no remedy has acted so well as PIPERAZINE. In renal colic and urinary [illegible] it is especially efficacious. PIPERAZINE-BAYER is made by a process whereby its cost is greatly reduced.

PIPERAZINE-BAYER is supplied in *ounces, ounces* and *tablets* [illegible] In general conditions it is combined with Phenacetine.

TRIONAL is a nerve sedative and hypnotic which has given very satisfactory results in cases amenable to treatment by other drugs. It is peculiarly valuable in slight psychical excitement accompanied by obstinate insomnia. It acts promptly, and is very useful in delirium.

TRIONAL is given in doses of [illegible] grains. Where pain is present it may be given conjointly with Phenacetine. *Supplied in ounces.*

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
CHAPTER I.—Early history of the Theory of Disease in Inebriety	17
CHAPTER II.—Theory in Modern Times.—Its Scientific Study	21
CHAPTER III.—Different forms of Inebriety.—Classes of Inebriates	26
CHAPTER IV.—Dipsomania.—Its Varieties.	28
CHAPTER V.—Philosophy and Etiology	38
CHAPTER VI.—Inebriate Diathesis	47
CHAPTER VII.—Predisposing Causes	55
CHAPTER VIII.—Traumatism and Injury.	67
CHAPTER IX.—Adversity, Sunstroke, Heat, and other Causes	80
CHAPTER X.—Inebriety in America	91
CHAPTER XI.—Mortality of Inebriety.—Fatality in Epidemics	100
CHAP. XII.—Inebriety and Consumption	103
CHAPTER XIII.—Effects of Alcohol and Beer on the Mental Functions	113
CHAPTER XIV.—Diagnosis of Inebriety.—Study of Social Statistics	118
CHAPTER XV.—Delirium Tremens	131
CHAPTER XVI.—General facts of Heredity.	145
CHAPTER XVII.—Statistics of Heredity.	183
CHAPTER XIX; XX.—Pathology, &c.	193
CHAPTER XXI.—Treatment.—Its Nature and Plan	213
CHAPTER XXII.—Inebriate Asylums and their Work	230
CHAPTER XXIII.—Hygienic Treatment.	141
CHAPTER XXIV.—Duty of the State	252
CHAP. XXV.—Care of Pauper Inebriates	254
CHAPTER XXVI.—Medico-legal Considerations	275
CHAPTER XXVII.—Rulings of Judges and the Law	286
CHAPTER XXVIII.—Irresponsibility in Inebriety	294
CHAPTER XXIX.—Special Forms of Irresponsibility, trance, etc.	305
CHAPTER XXX.—Relations of Inebriety, Coma, and Brain Disease	316
CHAPTER XXXI.—Inebriety from Opium.	326
CHAPTER XXXIII.—From Ether	341
CHAPTER XXXIV.—From Cocaine	349
CHAPTER XXXV.—From Chloroform	354
CHAPTER XXXVI.—From Coffee and Tea	356
CHAPTER XXXVII.—Psychosis caused by Nicotine	367
CHAPTER XXXVIII.—Arsenic and Ginger	371

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 range of hills and mountains can be seen, reaching from Wachusett in the southeast to Monadnock in the northwest.

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

Dr. Ira Russell is the founder and superintendent of the Home, and letters of 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.
W. C. Williamson, Esq., 1 Pemberton Sq., Boston.
J. H. Hardy, Esq., 23 Court St., Boston.
Rev. G. J. Magill, D.D., Newport, R. I.
Wm. A. Hammond, M.D., 43 West 54th St., New York.
G. Webber, M.D., 133 Boylston St., Bost'n.
G. F. Jelly, M.D., 123 Boylston St., Boston.
C. H. Hughes, M.D., editor of Alienist and Neurologist, St. Louis, Mo.
E. C. Spitzka, 130 E. 50th St., New York, N. Y.
W. W. Godding, Superintendent National Insane Asylum, Washington, D. C.
Clark Bell, Esq., editor of the Medico-Legal Journal, New York City.
T. D. Crothers, M.D., Hartford, Conn.

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.

BROMINE-LITHIA WATER

FROM GEORGIA.

Natural and Free from Organic Matter,

CONTAINING

20.524 GRAINS BROMINE,

OF WHICH	IN CONNECTION WITH
15.234 grs. Magnesium Bromide,	1.670 grs. Lithium Bi-Carb,
5.290 grs. Potassium Bromide.	.734 grs. Magnesium Iodide.
	.280 grs. Strontium Sulphate.

"A fine Lithia spring has been known for some time at a little hamlet called Lithia Springs, in Douglas County, Georgia. Recently an analysis has revealed the fact that it is the only spring known to science which contains Bromide of Potassium and Magnesia; this is combined with Lithium, Stroutium, and Iodide of Magnesium. The effect of this water is both a tonic and sedative, and in the army of Nervous cases it gives promise of being a remedy of wonderful power. Theoretically a natural combination of the Bromides with Lithia and the Iodides would be a remedy of great value in a large number of cases. Practically, it has more than fulfilled these expectations, and although this water has been very recently introduced, there are many reasons for supposing that it will become the most widely used of any medicinal water known."—T. D CROTHERS, M.D., in *Quarterly Journal of Inebriety* for April, 1890.

WE CHALLENGE THE WORLD!

The attention and careful investigation of the Medical Profession is earnestly invited to this wonderful Water. It is pure, bright, and powerful. *Samples free to all Physicians.* Correspondence solicited, which will be promptly answered. Physicians are cordially invited to visit the Spring, which is located at the village of Lithia Springs, Douglas County, Georgia, on the Georgia Pacific Division of the Richmond & Danville Railroad, 20 miles west of Atlanta, Ga., a ride of less than an hour from the city. Three trains daily. Handsome, commodious day coaches and Pullman Palace cars.

The elegant **Sweet Water Park Hotel,** with accommodations for **500 Guests,** all modern improvements, including electric lamps in every room, electric calls, and every convenience known to modern hotels.

The famous *Bromine-Lithia Vapor Baths. Electric, Massage; Plain Hot, Warm, or Cold Baths; Douches, Sponge,* and other forms administered under the supervision of a competent Resident Physician.

Twenty miles west of Atlanta, Ga., and accessible from Boston, New York, Philadelphia, and all points, by every railroad running to Atlanta.

BOWDEN LITHIA SPRINGS CO.,

Lithia Springs, Ga.

Handsomely Illustrated 36-page Pamphlet sent free, showing Hotel, Baths, Springs, Historic Ruins, etc. Send postal card.

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. *Fe lows.*"

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.

BROOKLYN HEIGHTS

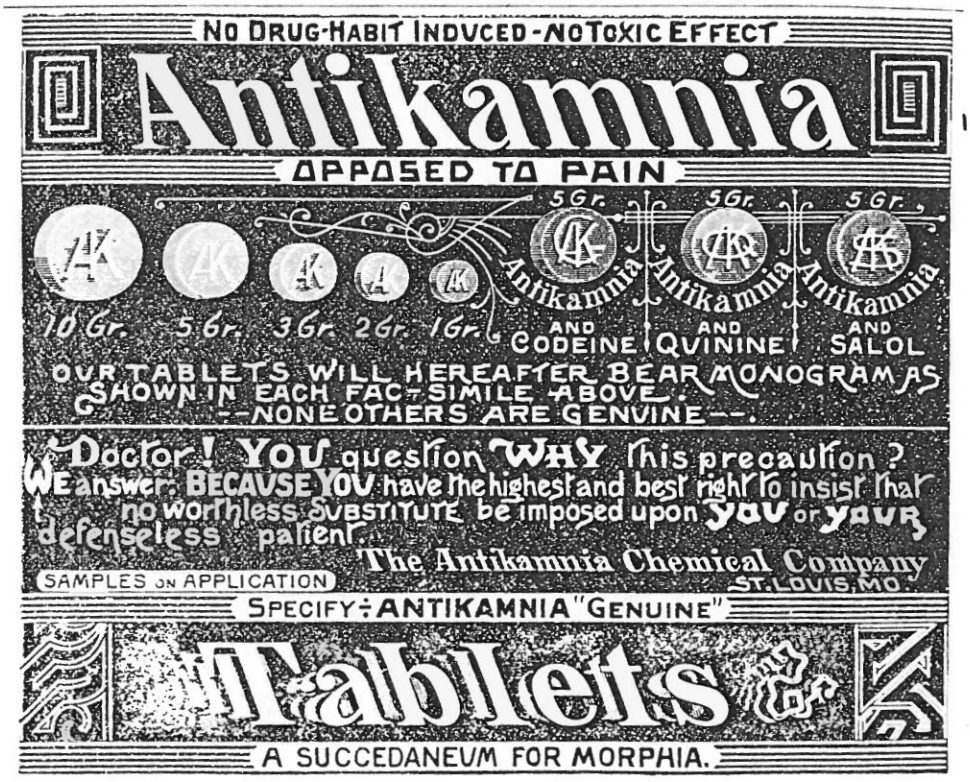
SANITARIUM

A PRIVATE HOME for the *special* teatment 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.

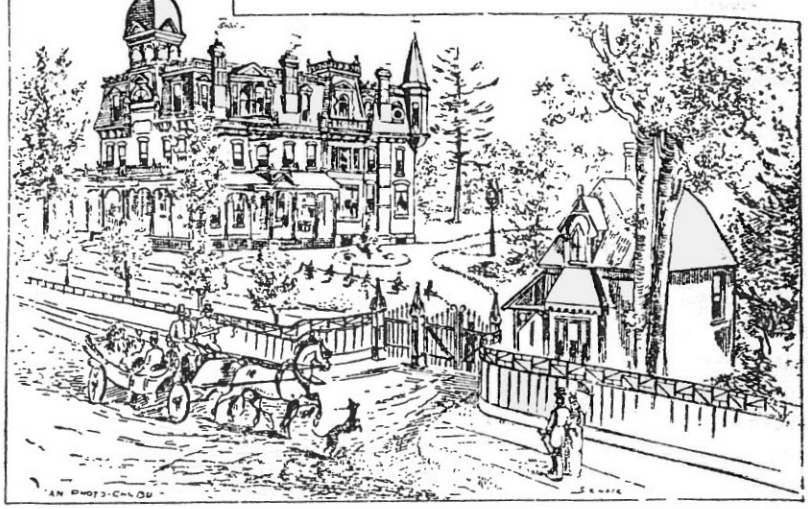
For further information, address —

C. H. SHEPPARD, M.D.,

81 Columbia Heights, Brooklyn, N. Y.



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.

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

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 Jurisprudence and Sanitary Science for the College of Physicians and Surgeons, Ontario.

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. 245, secs. 109 to 111.

For Forms of application and all necessary information, Address

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