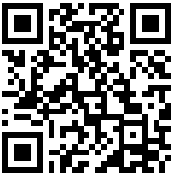

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—OF—

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THOMAS L. WRIGHT, M.D.

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LEGAL RECOGNITION OF DISEASED INEBRIATE CONDITIONS AS A VALID PLEA.—ILLUSTRATED BY RECENT CASES. *†

By NORMAN KERR, M.D., F.L.D.,

President Society for the Study of Inebriety; Corresponding Member Medico-Legal Society; etc., etc.

It has been shown by Clark Bell (Proceedings of the Society for the Study of Inebriety, No. 16, for April, 1888, London, H. K. Lewis) that there has been an increasing tendency of late years, in American judicial procedure, to take into account the state of the person at the moment of the commission of an act, as to whether he was unconscious and incapable of reflection or memory, from intoxication.

So has it been in British jurisprudence, in part due to the investigations of the Society for the Study of Inebriety into the diseased condition frequently present in inebriates.

It has occurred to me that it might prove useful to cite three recent cases, as an illustration of this gradually increas-

* Read before the International Medico-Legal Congress, at Chicago, April 16, 1893.

† Read before the Medico-Legal Society, New York, Nov. 8, 1893.

ing recognition by the law of certain abnormal personal conditions, as an element to be considered in dealing with civil and criminal cases complicated with inebriety.

IN CIVIL LAW.

This was an action brought by the widow of a publican against an insurance company for the sum of £1,000, for which sum he had insured his life against death by accident five years prior to his decease.

The case was tried before an arbitrator in the High Court of Justice in England in 1891, in accordance with a provision embodied in the policy, leaving all matters of dispute to be decided by arbitration. The company objected to pay, on the ground that the death was caused by disease induced by alcohol.

The facts of the case, as to the circumstances under which he met his death, were not disputed.

The deceased was 49 years of age. He was serving at the bar of his establishment on a certain evening, apparently in good health. A hand lift, which was used to transmit articles from and to the bar, somehow or other stuck fast. He rushed to free the lift. Not more than 20 minutes thereafter he was found in his cellar, faint and collapsed, having vomited a large quantity of blood. He died next day.

There was no evidence of deceased having been struck or directly injured in any way by the small lift itself, or by any part of the apparatus. Counsel for the widow urged that deceased died as a result of his efforts to extricate the lift, from hæmatemesis (bleeding from the stomach), occasioned by internal injury or strain.

There had been a coroner's inquest, and the jury had returned a verdict of death from syncope, following bleeding from the stomach caused by accident.

On *post-mortem* examination a considerable quantity (about one-half a pint) of a substance, in appearance like coffee grounds, was found in the stomach. The liver was hobnail, in a state of advanced cirrhosis, and weighed 74

ounces (normal weight about 56). The posterior base of both lungs was congested. The heart was fatty, soft, and flabby; weighed 11½ ounces (normal weight, 11 ounces). The kidneys were contracted or cirrhotic. The spleen was enlarged and engorged; weighed 14 ounces (normal weight, 8 ounces).

The deceased's family medical attendant testified that he had attended him for various illnesses for several years. These illnesses, spread over seven years, were, indigestion in 1882, pneumonia in 1884, indigestion again in 1885, albuminuria and dropsy in 1886, indigestion again in 1888, hæmatemesis and melænce (bleeding from the bowels) in 1889. Witness had cautioned deceased, on recovery from the attack of dropsy, against drinking.

Deceased's friends stated that, though he took "nips," they had never seen him drunk, and that he was a sober man.

The medical witnesses for the company, among whom were Dr. Benjamin Richardson and myself, united in the testimony that, judging from the report of the appearances after death, the deceased was in an advanced state of alcoholic poisoning, that various vital organs were diseased, and that his life for some time previous to his death had been most precarious.

I had no hesitation in giving my opinion, based on the medical evidence of deceased's attacks of illness for the previous seven years and on the *post-mortem* record, that deceased's life at, and for some time before, his decease had not been worth a moment's purchase, and that a fatal rupture (such as had killed him) of a blood vessel, might have taken place at any time, without warning, and without any assignable exciting cause. The medical expert for the widow tersely described the tissues of the deceased as "rotten" from the effects of drinking.

The award of the arbitrator was in favor of the company.

In this case the decision was clearly founded on the diseased state of the individual. Had he been fairly well the slight strain, if there was any strain at all (which was not

shown), involved in putting the lift to rights, would have had no injurious effects, as was admitted by the medical witnesses on both sides. But in his unhealthy state, with organ and tissue undermined by the action of the alcoholic poison, with the blood vessels themselves structurally enfeebled and brittle, the very slightest exertion, or even excitement without exertion, might have occasioned the giving way of the vessel in the stomach, with its fatal issue, the more so that the liver and the portal circulation were so diseased. Nay, such a mass of disease was the deceased that such a vascular rupture might have taken place suddenly without any apparent immediate cause.

The decision in this case, then, undoubtedly involved a legal recognition of a diseased inebriate bodily condition (though there was no actual drunkenness).

IN CRIMINAL JURISPRUDENCE: INCITING TO CRIME.

E. A., aged 31, a medical man, was charged before the Recorder's Court, London, in 1891, with inciting to an unlawful act.

The deceased was excitable, quick-tempered, nervous, very sensitive, fond of music, and accomplished. At the age of 12 years he got drunk on port wine. At 14 had an attack of scarlet fever, which nearly proved fatal. He was somewhat difficult to manage while at school, and was addicted to onanism till about 28. Took excellent diplomas at 22, practiced for a year, went to India at 23. Rather more than a year prior to leaving for the East, after a serious attack of follicular tonsilitis, he took to opium and spirits. Remained in India four years practicing his profession, during which time he drank whisky to excess, and took opium in the form of smoking, laudanum, and a watery infusion. He had also sunstroke and Indian fever. The largest daily quantity of opium taken was the equivalent of one quarter of an ounce of crude opium. A heavy smoker, smoking ten to twelve strong cigars a day. Within the last few months has taken much less opium and whisky, as he found he "could not stand

them." Had also taken chloroform occasionally. Had suffered from specific disease. There was a family history of insanity in one maternal uncle, and of inebriety in another.

I had a lengthened interview with him in the presence of the surgeon of the prison where he was detained awaiting trial. After a month's abstinence from all narcotics, he was greatly improved. Yet his reasoning power seemed limited. He could not long pursue one train of thought. He was restless, shifty, could not make up his mind definitely, or give a decided answer, on anything. He appeared to be still laboring under mental confusion and to be unable fully to realize the gravity of his case, though he seemed to feel his position acutely. The opinion I formed was that, from the effect of excessive indulgence in alcohol and opium (aggravated by excess in tobacco) his brain had become so affected as to induce a depraved moral sense, and seriously impair inhibition, and that in all probability at the time the offense was committed he was practically incapacitated to resist the depraved impulse.

By the advice of his counsel the panel pleaded guilty.

Before deciding on the case, the learned Judge (the late estimable Sir John Chambers) consented to hear expert evidence.

Dr. James Stewart stated that the deceased had been under his care for alcohol and opium inebriety for four months in the summer of 1890, and that he left long before sufficient time had elasped to effect permanent improvement. Dr. Stewart at that time had warned the prisoner's friends of the risk of so early a removal, and had expressed a very strong opinion as to his moral obliquity being due to an alcoholized brain, adding that unless adequate time were given for the building up of new brain cells, death would probably take place within five years.

My evidence corroborated this testimony. I had seen the prisoner's condition prior to his apprehension, and had then no doubt that, from his stupid, confused, and clouded mental state, he was quite unfit to be alone, and unable to

exercise control over his depraved impulses. I had also observed that his perceptive faculties were so obscured as to prevent him from seeing things as they really were; so that he lived, as it were, in an unreal world of his own. In response to further questioning, I, without any reserve, gave it as my opinion that the prisoner was still in a diseased condition, and that he needed seclusion under medical care in a special home for from eight months to a year at least, I also gave a hopeful opinion as to the probable effects of such treatment.

The Judge, on the understanding that the accused was willing to enter a home for inebriates for the remaining eight months unexpired of his former projected twelve months of residence, pronounced a sentence of five days' imprisonment. The practical effect of this judgment, the five days expiring that day, was that the accused entered the home and derived apparently permanent benefit from his sojourn therein.

Had the recorder not taken into account the accused's diseased inebriate condition, a term of ordinary imprisonment in a jail would certainly have been the penalty awarded; so that in this case there was a distinct legal recognition of such a morbid state.

CHARGE OF MURDER.

At the Staffordshire Summer Assizes, 1892, before Mr. Justice Collins, Harry Pugh, aged 28, a miner, was indicted for the willful murder of Anna Maria Gill, and also for attempting to commit suicide. (*Staffordshire Chronicle*, July 30, 1892.).

The deceased was found drowned in a reservoir, and, according to a statement made by the prisoner, she had drowned herself while he was in the water with her, they having mentally agreed to commit suicide, and having walked into the pool, from which he had escaped. Counsel for the Crown urged that, if the jury found that two persons had agreed together to commit suicide, and if one succeeded

in carrying that agreement into execution while the other did not, the survivor was guilty in law of willful murder. Over and above the suicidal intention there was a further charge, but the prosecution did not attach weight to this. Prisoner had stated that the deceased and he had gone into the water and had struggled together, when he overpowered her and held her till she was drowned. The main charge was being one of two parties who had endeavored to execute the common purpose of suicide, the other party having been drowned.

The facts of the case were these: The woman and the accused had been drinking together for two days, when she told a witness she was "going to jump into the cut." Accused said he would do so, too, but must first see his dog. Prisoner and deceased both kissed the dog, and he threatened to drown the dog, the woman, and himself. Next day he appeared sober, but was drinking with the deceased all day. They were last seen going in the direction of the pool. Prisoner returned to his mother's house all wet, and made a statement which led to the police being summoned.

Counsel for the defense admitted that, if two persons went into the water with the deliberate intention of drowning themselves, and in consequence of that intention one of them died, the survivor could be tried for murder. But there must be a solid and serious intention to commit suicide to warrant such a conviction. If the jury took another view of the case, they might find a verdict of manslaughter, but this would involve a deliberate cold-blooded intention on the part of the deceased to kill the deceased. All the conduct of the parties was against this. People who were intending to commit suicide did not go about from public house to public house all day.

Mr. Justice Collins said the one point in the case was the question whether two persons went into the water in the execution of a common purpose to commit suicide. It was necessary to consider whether the circumstances were not consistent with the prisoner's statement, having really been

made with a view to explain to the policeman that the woman had drowned herself, and as a disclaimer that he had any part in bringing about the drowning. They had also to remember that before there could be a common purpose, the minds of the two persons must have been in a condition sufficiently clear to enable them to frame an intention of this kind. Drunkenness, although often said to be no defense to crime, was a material factor where proved intention was a necessary ingredient of crime, for a person might be so drunk as to be incapable of forming an intention.

The jury returned a verdict of acquittal, and the prisoner was discharged.

The learned judge has been subjected to severe popular criticism for his ruling in this case, on the ground that he had made crime easy by allowing intoxication to be a valid plea. In plain words, he has been charged with having made "drunkenness an excuse for crime."

I venture to submit that Mr. Justice Collins was thoroughly justified, and that his ruling was in accordance with equity. It would be at once unjust and intolerable if a person were to be held accountable for a criminal intent which he was not in a state to form. It is to be hoped that this ruling will be generally accepted and followed. It would have been quite different if the accused had intentionally made himself drunk in order to commit a crime. This would have presupposed the presence of a criminal intent before the state of intoxication.

As I have endeavored, however feebly, to demonstrate in my treatise on the subject (Inebriety: Its Etiology, Pathology, Treatment, and Jurisprudence." H. K. Lewis, London, 3d ed., 1893), Inebriety or Narcomania (a mania for intoxication by any narcotic) is a disease involving the brain; and its presence, when demonstrable in the person or ancestry of an accused, ought to be deliberately and judicially considered.

THE ALCOHOLIC QUESTION FROM A MEDICAL POINT OF VIEW.*

By Prof. A. Strumpell,

Professor of Nervous and Mental Diseases of Leipsic University.

If in the general meetings of our society it is admissible to discuss matters of professional interest which are of far-reaching significance, whether for the general advancement of science, or as affecting the health and well-being of the community by their influence on practical daily life, the subject of my theme will, I think, find justification on both grounds. For on the one hand, we have the deep-rooted and ever-spreading habit of indulgence in alcoholic drinks presenting to the physiologist and the physician exceptionally rich material for the study of the many-sided and, scientifically, most interesting subject of chronic intoxication, a study whose teachings are of first-class importance to the study of toxicology generally. On the other hand, the peculiar operation of alcohol is conditioned by the fact that it not only induces many pathological derangements of the physical system, but further exerts an enormous influence on the mental constitution ; now paralyzing the activity and the will, and again generating injurious diseases and impelling to acts, which, without its influence, would never have been called into existence.

Hence it is that thinking men of the most diverse professional views are directing their attention more and more to this matter, and saying to themselves : Have we not here conditions whose existence imperils the well-being of the race and of civilization ? Shall we and dare we allow this thing to go on without at least making an effort to take hold and remedy a condition whose fatal tendency displays itself

* Read before the annual meeting of the German Naturalists and Physicians Society, September, 1893, at Nunburgh.

more fully the longer and more closely we devote our attention to it?

I will glance only briefly at the juristri and national-economic side of the alcohol question. The relation between alcoholism and crime has been repeatedly observed, and statistics sufficiently confirm the conclusions of popular opinion. Wherever these are appealed to, at home and abroad, we find the same high percentage of crimes and misdemeanors perpetrated, either under the influence of liquor or by notorious drunkards. Of course, as a physician I know very well that the relation between drunkards and crime is often misapprehended, that the former is frequently pointed to as the cause of the latter, while in reality they are more frequently the inevitable co-ordinate consequences of an inherited abnormal mental condition, a psycopathic degeneracy. Nevertheless in reality this pathological condition is not of such extreme significance in this regard. By making a distinction between occasional and habitual drunkards, it is found that by far the great majority of offenders belong to the former class. To cite only one example: of 1,130 persons convicted in Germany in 1892 for offenses against the person, 750 were drinkers; of these 600 were occasional drinkers, and only 150 confirmed drunkards. However, it is not my purpose here to discuss this branch of the alcohol question more closely.

Just as little could I attempt a satisfactory and exhaustive treatment of the economics and social significance of the alcohol problem. It is necessary only to open one's eyes to realize the intimate relation which subsists between the habit of alcoholic indulgence and the working and productive capacity of a people, their earnings, their habits, and their domestic life. There is, however, one branch of this subject which calls for professional comment, that is the generally accepted view of nutritive value of alcoholic drinks.

It is indisputable that by liberal indulgence in beer a considerable quantity of nutritive matter is introduced into the system, and the fact is a significant one which I will re-

fer to later. But what is the relation of the nutritive value to the price of beer? Here in Bavaria the laborer can buy four quarts of beer for 25 cents. At an outside estimate this quantity contains 240 grains of carbohydrates, and scarcely 32 grains of albumen. The latter amount expended on bread would give 2,000 grains of carbohydrates and 250 grains of albumen. It is evident then that the price of the cheapest beer is far in excess of its nutritive value. The thoughtless expenditure which hundreds of thousands of persons of moderate means incur in beer drinking constitutes a very heavy drain upon their incomes, frequently amounting to a sixth of their total earnings. I am not refering to drunkards here, but to industrious, well-conducted men on whom habit has impressed the idea that beer is one of the prime necessaries of life. As to the theory that alcohol in its operation compensates for a deficiency of albumen, it is not confirmed by more careful investigation.

What chiefly induced me to make the alcohol question the subject of my address was the purely medical aspect of the problem. It was not accident, nor special scientific proclivity that prompted me to give exceptional attention to the alcohol question, but the force of the facts which daily obtrude themselves upon the busy practising physician.

It is with right that the present epoch in medicine is characterized as the etiological. In the determination of the causes of disease we physicians now recognize one of the highest problems for our investigation, because we know that in this way alone can the way be paved, not only for the healing of disease, but for the still more important task of averting it. But how many diseases are there which in extent and importance are in any way comparable with chronic alcoholic intoxication? At the best the two infectious diseases, tuberculosis and syphilis, can be mentioned in the same connection; the chemical action of specific poisons should prove a simpler subject for investigation than the complicated biological influences of parasitic microorganism. It is in fact remarkable that chemical investiga-

tion has been so little directed to the scientific study of this alcohol question, that we are even now quite unable to make a conclusive presentation of its several modes of action upon the human system.

Before I attempt to explain at least some of the most important of the pathologic consequences of indulgence in alcohol as they present themselves to the physician, I should like to make a few short remarks on poisons in general. They appear to me to be important to a correct apprehension of chronic poisoning generally. Let us take for example in the first place a well-known chronic intoxication — chronic lead poisoning. We see here as a rule that the workmen exposed to its dangerous influence absorb daily only a very inappreciable quantity. The operation of these small doses on the system is for the most part quite inappreciable. But after the workman has been for years uninterruptedly exposed to its influences, he suddenly develops grievous symptoms of lead-poisoning — a colic, a paralysis of the hands, an epileptic stroke, or such like. Then the effect must necessarily have been cumulative, and this charasteristic, and from the theoretical point of view, very interesting fact of the cumulative effect of repeated small doses of poison, is manifest in nearly all chronic intoxications, and serves in many cases to explain the otherwise unaccountable phenomena of the sudden manifestation of alarming symptoms. All the indications point to the conclusion that it is the nervous tissue which is especially exposed to this cumulative action of poisons administered in minute doses; and it is, perhaps, something more than a mere fancy if I characterize these phenomena as a species of memory of the nerve fibres and ganglionic cells, comparable to a certain extent with the memory of higher mental impressions. The observation of the chronic action of alcohol itself teaches us that as regards this easily destructible nervous tissue, it is not by an accumulation of the toxic substance itself, but by the permanent consequences of its chemical action, which inaugurates merely imperceptible changes in the nervous

tissue. These changes once inaugurated increase gradually, and finally pass over into a permanently diseased condition.

This fact is of the utmost importance to a practical view of chronic alcoholism. It shows us why the apparition of chronic disease is not necessarily heralded by appreciable symptoms of acute poisoning. Hence medical experience, the more carefully and forcibly it is directed to this point, is so much the more strengthened in the conviction that it is by no means only the free drinkers and notorious drunkards who are victims to the prejudicial operation of alcohol, but also innumerable persons who would repel the appellation "drinker" with indignation.

As with almost all other acute and chronic intoxicants, alcohol affords an interesting example of the varying effects of one and the same poison on different systems as to the period at which disease announces itself, the form which it takes and the conditions under which it is rendered manifest. These facts are of theoretic interest, being clearly associated with the inmost conditions of our organization, and practically important as rendering intelligible the numerous apparent contradictions which attend the manifestation of alcoholic poisoning. We must not, however, ascribe too much to differences of individual constitution. Other conditions much be taken into consideration to enable us to afford an intelligent explanation of the various forms in which alcoholic poisoning manifests itself. Without going fully into this subject I would like to draw attention to the interesting fact, viz., that the outbreak of cumulative alcoholic poisoning may be conditioned by co-existent noxious influences of another kind. It has been frequently observed that after acute feverish symptoms following a wound attended by considerable loss of blood, the progressive, but until then, latent operation of alcohol manifests itself at once. These remarks apply not merely to alcoholic delirium, but equally to other alcoholic diseases, and this fact is of first-class importance to the proper comprehension of the etiology of disease.

Like most poisonous substances the action of alcohol is primarily on the nerves. In acute intoxication the paralysis of the psychic powers is most noticeable. Closer observation, however, shows that even in the lesser degrees of alcoholic poisoning there is innervation of the motor nerves, unsteadiness of gait, indistinctness and difficulty of speech, while the afferent nerves appear much less affected. These phenomena of acute intoxication are observable in the two chief forms of nervous derangement resulting from alcoholic poisoning which display themselves in the realm of the higher consciousness in the form of delirium tremens, and in the realm of the motor-nerve system in the form of alcoholic tremor, paralysis of the motor nerves and ataxia, in a word, the so-called polyneuritis. This last is well known as the most frequent and gravest form of nerve degeneration resulting from alcoholic poisoning.

But interesting and important as is the study of delirium tremens and alcoholic polyneuritis, we must not attach too much practical importance to them. Their occurrence is rare. The former seldom manifests itself except in the lowest grades of society in large cities; alcoholic neurosis, too, is not of frequent occurrence, but it will be recognized as more frequent when the knowledge of the disease is more widely spread. I have frequently recognized the disease even among heavy beer drinkers.

Turning now from the effects of alcoholism on the nervous system to its effect on the other organs, and bearing, of course, in mind that it is always difficult to determine whether this latter is direct or only secondary as a result of neurotic disease, we find numerous instances both of acute and chronic diseases of the mucous membrane of the pharynx, stomach, and intestines. These are important, not only from their frequent occurrence, but especially for their bearing on the general alimentation. I believe most physicians will agree with me in the view that inflammation of the stomach and bowels in adults is almost invariably due to alcoholic poisoning.

But alcohol exerts its essential and most significant

influence on the vital organs by being taken up in the circulation and thus brought into direct contact with their cellular tissue. We have no clearer evidence of the direct action of a poison in producing primary cell death than is afforded by the action of alcohol on the liver, producing liver-cirrhose. Typical liver-cirrhose was found in three per cent. of all the male bodies examined at the Leipsic Pathologic Institute.

But the organic changes which my own experience compels me to place in the first rank as denoting the most injurious effects of alcoholic indulgence are the diseases of the muscles of the heart and its nervous apparatus, the diseases of the arteries and of the kidneys.

But while it has long been known that delirium tremens, neurosis, and cirrhose liver owe their existence to alcoholic poisoning, it is by no means generally recognized that chronic heart and kidney diseases are due to the same cause. And yet the practical significance of precisely this form of alcoholic poisoning, apart even from its frequency, is of the highest, from the fact that these diseases are induced not so much by the use of concentrated alcohol, but especially by heavy beer drinking. This habit of excessive beer drinking is very widely prevalent among the cultivated classes, and claims its victims among men who regard the drinking of *schnapps* as an act of moral degradation. It is not only that the quantity of alcohol consumed by heavy beer drinkers is excessive, but the consumption of liquid involved in the habit is no less excessive and injurious. To this, too, must be added, as hardly less prejudicial, the consumption of an extra and undue amount of nutritive matter contained in the beer.

All these conditions tend to that disease which is rarely absent in steady beer drinkers. The prime anatomical change exhibits itself as hypertrophy of the muscles of the heart, especially of the left ventricle. This is the result of a continuous overtaxing of the heart's powers. The prime factor here is the excessive amount of water which before it can again be given off by kidneys, skin, and lungs must be

taken up by the blood and maintained in motion by the heart. The excess of nutritive matter furnished by the beer contributes to the same result.

Kidney diseases as a result of alcoholism are still more frequent, and with wine and beer drinkers the extra labor imposed on the kidneys by excess of fluid renders them especially susceptible to the large influence of the accompanying alcohol.

Finally, there is another interesting group of diseases resulting from alcoholic action in disturbing and upsetting the chemical processes of assimilation. The leading types of diseases due to this cause are gout, diabetes, and fatty degeneration of the heart; and while allowing that in many cases alcoholic action may be supplemented by contributory causes, I think it will be apparent that the sum of the evils properly ascribable to alcohol is such as to warn us physicians that here is a matter in which all our forces should be enlisted. Where the foe has once obtained a secure foothold it may be beyond our powers to dispossess him and undo the evil he has wrought. But prevention is in principle so easy. Nothing is needed but insight and good will! Shall we then not gladly embrace the opportunity to avert such endless misery, and no longer stand supinely by while one worthy life after the other falls a victim to the insidious too?

I can only ascribe the indifference of the medical profession generally to a want of realization of injurious consequences due to the habit, and to a mistaken impression of the action of alcohol on the system, which is frequently prescribed under the impression that it possesses wholesome and even healing properties. The physician, as family friend and adviser, should be careful not to err in this direction, and especially should children be strictly prohibited from tasting alcoholic liquors. The ridicule with which the opponents of alcohol are sometimes assailed by the unthinking will lose all its points when one is supported by the firm conviction that he is toiling for a good cause in the service of humanity.

NITRATE OF STRYCHNINE IN ALCOHOLISM.*

By J. Bradford McConnell., M.D.,

Professor of Pathology and Associate Professor of Medicine, University of Bishop's College, Montreal.

In *Merck's Bulletin* for August, 1891, a brief notice of Dr. Portugalow's experience with the nitrate of strychnine in dipsomania is given. He professed to have cured four hundred and fifty-five cases, and asserts that he knows of reliable and specific remedies for two affections only — strychnine for the various forms of alcoholism, and quinine for malarial fever. He used a solution of six decigrammes in fifteen grammes of distilled water, giving a half to a quarter of a gramme hypodermically once or twice daily, ten to sixteen injections completing the treatment. Similar results were obtained by Dr. W. N. Jergolski and others in Russia, Germany, and Italy.

That strychnine, cocaine, atropine, capsicum, cinchona, and other nerve tonics had been employed with advantage in alcoholism is a fact generally known, but that such brilliant results could be obtained by such a well-known remedy as strychnine, properly administered, filled a gap in the therapeutics of a disease with which hitherto medication had mostly been fruitless, and which could only be regarded and hailed with grateful appreciation by the general practitioner, who could hitherto do so little for this by no means small class of afflicted humanity.

I have treated during the last fifteen months some thirty cases, twenty-five of whom received the full course of injections. The results will, I think, demonstrate what benefit we can obtain from it in this form of narcomania. Due attention was paid in each case to the associated derangements and the constitutional peculiarities. The patients all came

* Read before the Medico-Chirurgical Society of Montreal, 1893.

to the office for treatment, and although recommended to abstain from further drinking, were allowed to take liquor if they desired it. The dose given subcutaneously varied from a thirtieth to a sixth of a grain twice daily for ten days, then once daily for ten days, the highest dose being reached about the third or fourth day, and continued to the close of the treatment, this being nearly in accordance with Spitzka's experiments, that to maintain its action the doses of strychnine must be in the beginning increased, and later the interval increased and the doses lessened. The border line of tolerance was reached in most cases when one gramme was used of a solution containing twelve centigrammes of strychnine nitrate to fifteen grammes of water — that is, about two-fifteenths of a grain. Internally, cinchona, peroxide of hydrogen, and capsicum were frequently prescribed in combination. When bromide of sodium failed to procure sleep, paraldehyde always succeeded. In the later cases strychnine in doses of one-twentieth of a grain, with elixir of phosphates and calisaya, together, was ordered to be taken once or twice daily for four or five weeks after ceasing the injections.

The following brief reports of each case are condensed from the notes taken in detail during the progress of the treatment.

Two solutions were used — one containing six centigrammes to fifteen grammes of water, and in the later cases one of double the strength, equal to two grains to the half ounce. The weaker solution was used in all cases unless where the stronger is mentioned.

Case I. — November 10, 1891. Insurance agent, aged fifty; has used alcohol since twelve years of age, and to great excess for twenty years, and more or less continually during the last four years. Marked family history of alcoholism. Patient is small in stature, emaciated, tongue thickly coated, tremulous; has had very little sleep for a week.

Gave a purgative and bromide of potassium.

On the 11th began the injections, giving half a gramme

twice daily. He states that usually after a prolonged spree, during the first two or three weeks of abstinence he suffers from cramps in the limbs, and for four years has had night sweats. Had no cramps after first injection, and claimed to have no desire for liquor after the first day. At the end of the first week of treatment he showed remarkable improvement in every respect; had ravenous appetite, slept well, no depression, and sanguine as to the virtue of the treatment. During the second week had one injection daily. When the treatment ceased he then professed to enjoy as good health as ever before; he reported from time to time the entire freedom from desire for liquor, and remained so for eleven months, during which time he had no regular work. Having got a situation, after his first pay he ventured a glass of liquor, when the ardent crave was re-kindled and a prolonged debauch followed.

Case II. — Molder, aged fifty; is a strong, robust man. No family history of alcoholism or other neurosis. Received a blow on the forehead about thirty years ago, where a depression still exists; began his drinking habits after that; has drank hard during the last fifteen months, and is now imbibing all he can procure — sometimes forty glasses of liquor daily.

Had two injections twice daily for a week; took no liquor after the first day, and after second day claimed to have no desire for liquor. He became ill with *la grippe*. Having received ten injections, I heard from him four or five months after, and learned that he had not up to that time partaken further of spirituous drinks.

Case III. — Insurance agent, aged forty-six; has a neurotic family history, there being cases of alcoholism and insanity. Has drank steadily for thirty years. I requested this patient to drink all he wished during the treatment. He was poorly nourished, not having the means to properly maintain himself, owing to his habits.

Drank twenty glasses of ale the first day of treatment, the number diminishing daily until the end of the first week

when his desire ceased. At the end of the second week he appeared free from the drink crave, and had improved very much in his physical condition. At the end of two months he again resumed his drinking habits; his relapse was attributed to the unwillingness to give up his lifelong habit of ale at meals.

CASE IV. — Advocate, aged forty; has drank inordinately for about ten years. No hereditary cause; attributes the acquirement of the habit to the treating custom; suffers from gastritis, with morning vomiting and sleeplessness; gave sodium bromide and columbo and parvules of calomel, one-twentieth of a grain every hour; gave first injection December 17th; found a tonic effect after first injection; no vomiting after next morning; took liquor daily until 25th; none after. All the catarrhal symptoms disappeared after the first week of treatment, and also the desire for liquor. Ceased the treatment on January 1st, patient feeling quite restored; in a couple of months he had relapsed into his old condition.

December 26, 1892. — Came to have another course of treatment, having confidence in its power to relieve him of his desire for alcohol. The gastric symptoms were predominant; the strong solution was used, beginning with five decigrammes, and increasing daily until ten were reached; gave two injections daily for ten days, and one daily for ten days longer. After the fourth day the gastric symptoms were quite relieved and the desire for drink was gone. Attempted a glass of wine a day or two after, but found it flat and distasteful while taking two full doses daily. On two occasions noticed for a few minutes involuntary contraction of upper limbs. Since end of first week appetite and digestion have been good, and he professes to feel better physically and mentally than for months. He, however, will not consent to total abstinence for the future, which to those who can only drink immoderately is the only remedy.

CASE V. — Printer, aged forty, single, a drunkard for about twenty years. No hereditary predisposition. Ac-

customed to be off work two or three days each week. Began treatment December 30, 1891, the ordinary solution; had no desire for alcohol after first injection, recovering in a week his accustomed health. On inquiry, I find he remained well for eleven months, when he again resumed his drinking habits.

CASE VI. — Painter, aged fifty, has drank spirituous liquors since eighteen years of age; father was a hard drinker. He cannot sleep; has no appetite, constipated, tongue coated, smooth at tip and edges. Has an intense crave for alcohol; drank a few hours before beginning the treatment. Took no alcohol after first injection; was at a dinner party four days after where liquor was used, but had no desire for it and took none. After fifteen injections he was discharged, much improved in general condition and changed in his appearance.

CASE VII. — Corset-maker, aged thirty-two; has used liquor for fifteen years, and excessively for ten years; went on protracted sprees at irregular intervals; treatment continued from February 5 to 20, 1892. Was drinking when the first injection was given. No desire for liquor after second day, and steady progress afterward toward his usual condition of health in the intervals of sobriety; four months after he again resumed the habit.

CASE VIII. — Druggist, aged twenty-nine; has used alcohol since nine years of age. Had not taken any for two years previous to three months ago. Had made many attempts to give up the habit, but without success. No heredity. No insanity or nervous disease in the family; desire for liquor left after second day; states that he has not experienced any of the symptoms of nervousness and depression observed at other times when breaking off. At the end of the two weeks' treatment was in good condition and no desire for stimulants. Some three months after learned that he had relapsed.

CASE IX. — Auctioneer, aged forty-two; has drank intoxicants for about thirty years, during last six years almost con-

stantly; was irregular in his attendance and got about twenty injections; began drinking immediately after.

CASE X.— Waiter, aged fifty-five. Has used liquor since he was twenty years of age; father drank; has abstained at intervals of two, three, six, and eleven years. The last six years' abstinence ended a year ago, when, for some reason, brandy was recommended by his physician; since then has drank more or less constantly. Was intoxicated when he got the first injection, February 15, 1892. Much gastric derangement and sleeplessness. Bromide of sodium used to procure sleep. Had no desire after the first day, and has not drank any since.

CASE XI. — A man, aged forty. No occupation. Interdicted for some six years; a chronic inebriate, with inherited predisposition. When first injection was given was in a stupor and semi-paralyzed condition; had been drinking very hard for two weeks, and had for the last week taken sixty grains of sulphonal at bedtime, furnished to him on his own application by a druggist. He began treatment on February 25, 1892.

At the end of two weeks he had improved very much, and for a week had not asked for stimulants. He then went out for a drive, and passing a saloon to which he was accustomed to go, could not resist the temptation to enter.

He was then placed in a private ward in hospital, and the injection given for three weeks. After the fourth day he did not ask for liquor, and at the termination of the treatment had quite recovered himself, and left stating that he had no desire for alcohol and that he would not again touch it. Three days after he had broken his resolution.

CASE XII. — Gardener, aged thirty-three; has taken liquor since the age of fifteen; father drank. Patient gets intoxicated every pay night (Saturday), and would return to work on Monday. First injection, February 23, 1891. He drank none after the first injection; had two weeks' treatment, one injection daily. He remained a total abstainer for five months.

Reported himself again for treatment on December 19, 1892. He had gone on a visit to the United States, and while in company was induced to take a glass of beer, and for the last four months has drank more or less constantly, and has been drunk daily for the last four weeks. Put tartrate of antimony into his accustomed liquor and advised him to use it for a day or two while under the treatment; it caused considerable nausea and vomiting. Used the stronger solution twice daily for ten days, and once daily for ten days longer. Was free from the craving after the first day. Took the tonic for five weeks; two days after it was finished he began drinking again.

CASE XIII. — Widow, aged forty-four; has used liquor for twenty years, inordinately for four years. She suffers from chronic gastritis; pains in the hands and feet. First injection, March 1, 1893. At the end of the first week, inclination for her usual stimulant had left, and her gastric symptoms had much improved. During the first week of treatment she avoided passing the saloon which furnished her with whisky, fearing that she would not have the courage to do so without calling. After the first week she passed it daily, and was quite free from desire for alcohol; remained all right for six months.

CASE XIV.— March 5, 1893. Commercial traveler, aged thirty-seven, single; has been an alcoholic for seventeen years; father drank. Took rye during the first three days of treatment, but states that its effect is different from what it usually is. He thinks that under the influence of the injections one can take larger quantities of alcohol without it having the ordinary effects. Increased his injections to one-twentieth of a grain. After the fourth day he had no desire for his accustomed rye. On the thirteenth day he received some unpleasant news, and tried to assuage his feelings with rye, but it was not gratifying, and he took no more. He remained all right one month only.

CASE XV.— March 9, 1893. Civil engineer, aged forty-two; has used liquor for twenty-one years; father drank.

One-gramme doses were given. Lost all desire after the fourth day. Three months after had resumed his drinking habits.

CASE XVI.— March 27, 1893. Butcher, aged twenty-six; an inebriate for eight years; father used liquor, but not to excess; a brother a hard drinker. Gave thirty one-gramme injections. Lost the desire for alcohol after the fourth day, and has remained an abstainer up to this date.

CASE XVII.— March 28th. Telegraph operator, aged forty, a drinker for twenty-five years; no hereditary predisposition, sleeplessness and gastric derangement. Took no liquor after the first injection. Made a satisfactory recovery. Relapsed four months after.

CASE XVII.—April 5th. Broker, aged forty-seven; has used liquor for twenty-seven years; latterly is constantly under its influence; marked facial acne; much gastric distress. Combined $\frac{1}{150}$ grain atropine with the strychnine once daily until its physiological action was fully developed. Had three weeks' treatment. Took liquor daily until the end of the first week; after that had no desire whatever. Stated at his last injection that he did not wish to give up the habit of using wine at dinner; he was advised of the danger of doing so. Some two months after he was as bad as ever.

CASE XIX.— July 11, 1892. Commercial traveler, aged forty-one, single; no inherited tendencies. Has used liquor since eighteen years of age; now goes on prolonged sprees; has gastric catarrh. Gave internally peroxide of hydrogen, compound tincture of cinchona, and tincture of capsicum. Used no liquor after the first injection. Gave him a mixture to take for a month after his treatment, containing strychnine nitrate in elixir of the phosphates with calisaya (Wyeth's). On January 12th (six months after) reported having been a total abstainer ever since, although daily in places where liquor was retailed.

CASE XX.— September 8th. Manager boot and shoe factory, aged sixty. Used alcohol first at twenty years of

age; at twenty-seven used it excessively for years back, and has indulged in prolonged debauches three or four times a year; has now been drinking four weeks. No hereditary tendencies; patient is much debilitated, no appetite, and cannot sleep. Paraldehyde gave sleep. No desire for liquor after fourth day, when he returned to his work and has remained well to date.

CASE XXI.— October 30th. Clerk, aged thirty-seven; has used liquor for eleven years. No hereditary predisposition. Uses mostly whisky. Sleepless; paraldehyde gave sleep; got thirty injections; no desire for liquor after second day. At the end of his treatment was feeling unusually well. He has remained at business and has not taken any liquor since.

CASE XXII.— October 3d. Agent, aged fifty-nine; has used liquor since a boy, and up to thirty-five years of age could get drunk every night and be up at work the next day. Since then has been a confirmed inebriate. Both parents were very intemperate. The injections within two days had improved the condition of his stomach and lessened the desire for alcohol, but he continued his beer during the first week — a glass or two at bedtime. Two days before the treatment was completed he left the city for two days, and at a gathering of friends indulged very freely.

CASE XXIII.— Traveler, aged forty, had a sunstroke in 1880; no hereditary influences. Although he took a glass of ale occasionally, it was not until after the sunstroke that he began to indulge freely; has now been drinking steadily for four weeks; he was sleepless and on the verge of delirium tremens; secured sleep readily with paraldehyde and bromide of sodium; began with seven decigrammes of the stronger solution, increasing it up to ten; thirty injections; drank none after the first day and made a rapid recovery, resuming work within a week.

CASE XXIV.— March 26, 1892. Carpenter, aged thirty-four; began to drink seven years ago; takes two to three days continuous drinking spells at irregular inter-

vals; last one continued a week; not inherited; sleepless and no appetite. Three doses of paraldehyde gave sleep. Gave thirty injections, beginning with seven decigrammes of the strong solution, ten after third day. Took no liquor after first injection; went to work on the second day, and made a rapid recovery to his normal condition. To take tonics for one month. Has remained well to date.

CASE XXV.— December 8, 1892. Broker, aged thirty; has used alcohol for about eight years, excessively for six years; no heredity; much gastric derangement. Gave a purgative of powdered rhubarb and calomel. Bromide of sodium, peroxide of hydrogen, tincture of calumba, and capsicum internally. Required paraldehyde to get sleep. Blood examined. There were 4,400,000 red corpuscles to the cubic millimetre; about seven-tenths of them were shrunken and very irregular in shape, with jagged edges, some of the projections acute, others truncated. No craving for alcohol after the third day of treatment. Thirty injections — all ten decigrammes — after third day. Although mingling with his old associates daily in places where liquor was sold, felt no desire whatever for it; appetite was good, and he appeared fully restored to his usual health.

From the results obtained in these twenty-five cases we can learn that, simultaneously with the use of this remedy, the crave for alcohol in inebriates diminishes and in a few days is completely gone, and through the withdrawal of the poisonous beverages and the tonic effects of the strychnine there is a more or less rapid restoration to sound physical health and of the mental powers; but as most of those treated have relapsed within from one to eleven months, the inhibiting power of the remedy is not permanent, and while it temporarily relieves the distressing and overwhelming crave for more stimulant and promotes a return to normal health, and in which condition the patients may continue to remain, yet they still lack the necessary will power to enable them to avoid the dangers which they know will precipitate a return to their previous enslaved and degraded condition. So that,

while it is fully within the power of medical science to restore these patients to temporary health, strychnine does not — as doubtless no drug treatment ever will — prevent the possibility of further relapses, although we can always depend on it to arrest what would be a prolonged debauch if its aid is early resorted to. That weakened will power is a result of a prolonged use of alcohol is generally conceded, as is the fact that the tendency to alcoholism is in a large percentage of cases inherited, and it is often, as dipsomania, one of the manifestations of insanity; that a definite series of pathological conditions follows the continued indulgence in alcohol, differing only in degree in the case of the milder methyl to the powerful effects of amyl alcohol, the nervous system showing the earliest and most marked disturbance, although every organ and tissue in the body eventually suffers. These and many other facts have led neurologists to place alcoholism as a distinct disease among the neuroses.

This position implies a complete revolution in the methods of treating these cases, and has brought to the aid of philanthropists and moralists the assistance of the medical profession, upon whom now devolves the duty of further elucidating the true pathology of the disease and indicating the best means of restoring this numerous class of patients to a normal condition.

That the urgent demand for relief from the evils of intemperance is being recognized by the profession is evidenced by the increased interest taken in the work of the American Association for the Study and Cure of Inebriety, and in the Section for the Study of Inebriety of the British Medical Association, and by an ever-increasing number of scientific investigators throughout the world.

Before rational and effective measures can be adopted for the proper management of inebriety, we must have correct opinions in regard to the physiological actions of alcohol and the pathology of the disease; otherwise we must trust to the empirical results of experience.

The decomposition of alcohol which takes place in the economy is not yet known. It has been generally accepted that from one to two ounces can be oxidized in the system, giving heat and force to the extent of the oxygen used, but the tissue changes are lessened, as evidenced by the diminished excretion of urea and CO_2 and to the degree that they have been robbed of oxygen by the systemic digestion of the alcohol. From this fact has sprung the idea that it conserves the energies and lessens waste, and on this assumption it is frequently prescribed as a sustaining remedy; but a view which would appear to be nearer the truth of the matter is that which denies that alcohol is a food in any sense, but being a ptomaine, a result of decomposition, it is, like these, generally a poison in all its actions; that it is not oxidized in the system, but that it combines with the hæmoglobin and destroys its functions of absorbing O, the diminished urea and CO_2 being in this way accounted for. Other observers have demonstrated that the leucocytes have their vitality lessened by the continued use of alcohol, and, in harmony with our recent views on phagocytosis, this fact would explain the greater susceptibility of drunkards to the action of pathogenic bacteria and their lessened resisting power in throwing off disease, although Mortimer Granville maintains an opposite view on this point, and alleges for alcohol-drinkers a greater immunity than for abstainers. That the red corpuscles are profoundly altered was observed in the last case I reported — the only one in which the blood was examined. We have here the evidence of a veritable poikilocytosis in a subject where neither aglobulism nor achromatosis existed. Most of the effects of alcohol are apparently explained by its paralyzing effect on the vaso-motor system from the first contact. We have also the slight stimulating effects on the heart of small doses, and its local and reflex irritant action on the alimentary tract, which results in increased buccal and gastric excretion, thus favoring digestion; but even this advantage is not upheld by the recent experiments of Blumenau, who found that the total action was

impairment of digestion; and when we take the fact that even the stimulating effects are quickly changed into paralytic conditions, and, where often repeated, leading to exhaustion of every function and more or less degenerative changes throughout the body, we can readily understand how we are to get beneficial effects from drugs having the action of strychnine.

The chief action of alcohol, then, is to paralyze the vaso-motor system, dilating the arterioles. Strychnine, besides exalting the excitability of the spinal cord and probably the motor centers in the brain, stimulates the vaso-motor centers, contracting the arterioles, as well as being one of the most efficient heart tonics through its stimulating effects on the cardiac ganglia.

While we have in strychnine a true antagonist to the action of alcohol and one that will counteract its effects, the inebriate still requires aid which can scarcely be expected of drugs; he needs the mental and will power to overcome his acquired or inherited tendency to resort to narcotics. This must come from treatment which seeks first to restore all the abnormal conditions of the patient; whether due to alcohol or otherwise, then strict abstinence must be maintained, the patient being aided by moral suasion, the diversion of continual employment, and the education of the mental and moral faculties to a higher status; even the influence of hypnotic suggestion may be applied in suitable cases, as has been done recently with a fair measure of success; and where these means fail, then institutions where voluntary or forced detention can be secured, and where all the present known means can be most successfully applied, must be the only hope of restoring the unfortunate subjects of narcomania.

THE Arkansas State Board of Health has been given power to revoke the license of any physician who is guilty of habitual drunkenness.

SOME LEGAL RELATIONS OF INEBRIETY AND ERRORS OF TREATMENT.

By Dr. John G. Reed, Cincinnati, Ohio.

A great city adapted to traditional civilization, in the matter of legal responsibility, trials, and of punishment for crime of her people, sometimes to long delays, changes its administration to be fully adapted to the practical conditions of evolution. In the consideration of her grandeur, opulence, and stability, comes the fact that over fifteen thousand people are punished for crimes yearly in Cincinnati, and many of this number over and over again, under laws which, tested by scientific facts, are as barbarous in this age as were the prison laws of England before they were changed through the genius of Charles Dickens, or those more recent in America by the labors of a few determined philanthropists. Of the class that may be arrested on sight under the law as common criminals are aliens without ability to adapt to conditions of civilization, and so feebly comprehend moral and legal responsibility as that humanity demands State protection as well as industrial confinement suited to their peculiar condition. Deductions by experimentalists in the treatment of inebriety during the last ten years are now used by specialists in most of the States in the rational and successful treatment of it. They conspicuously figure in the present revolution of medical practice, and through human evolution must take shape in laws for the better management of both criminal and civil inebriates and for greater protection to society. The discriminate application of the word "disease" to this class, justified by statistics of penal institutions and of retreats for the scientific treatment of drunkards, demand that our penal laws pertaining to the punishment of inebriates cease to smack of Oriental barbarism such as is only a step removed from capital punishment for witchery and insanity,

and that they shall embody the intelligence and humanity warranted by scientific facts and the spirit of American government.

A drunken man is an insane man, and all the ancient and modern metaphysics that are so ingeniously woven into the penal laws of the land that deal indiscriminately with this class, though sustained by the asceticism of the church, can not change the fact. The effect of alcohol is to anæthetize the brain — paralyze it — obtuse the senses, lower the general tone, and thus greatly abridge the automatism of the body and mind. Within the range of its action are all manner of delusions, illusions, and hallucinations based upon congenital or slowly acquired constitutional defects, which, often at the time of a crime committed, force the alternative of drunkenness to some other form of insanity.

The fire has been smoldering unobserved in many of these cases for years, until a high degree of instability in a state of irresponsibility carries them into drunkenness by the irresistible force of environment. In this culminating state, reached through a long period in either of many ways, and always characterized by perverted senses and inability to grasp events or to live in fear of technical law, they commit crime, and continue to commit the same crime over and over, and pay the penalties exacted. The irrational and indiscriminate fining of inebriates does not deter from, but allures to, crime.

Dr. Crothers, an eminent writer, says: "The inebriate who has been arrested for petty crime while intoxicated many times before, finally commits murder in the same condition, and is executed. His friends and companions do the same thing, and suffer the same penalty. Thus one brutal murder, committed in a state of intoxication, is followed by another equally brutal, and the execution of the number makes no diminution in the number of similar crimes that follow." Many of these cases have no conception of the state of life the law presumes they will acquire by trying to humiliate them by inflicting pain. They are the imitative

class led by perverted instincts, and are paralyzed, congenitally or otherwise, in their moral nature. The feeling of pleasure and pain is not recorded in the brain as ideas are; and so with the loss of our moral nature in degrees we correspondingly, without regard for the legality of acts, appropriate that which belongs to others, just as we continue to fall over objects that lie in our way, when the muscular sense is greatly impaired or suspended, without desire or motive. Mark the contempt in which these people are held by court officers when they stand like "dumb driven cattle," while his Honor voices the third, fourth, fifth, and often tenth sentence. So feebly do they comprehend what is going on that the automatism of criminal life lends to them a modicum of contentment — bliss of ignorance of crime. When alcoholic inebriety plays a part in this class the workhouse does not terrorize, as it becomes by habit their last port in a storm — a kind of haven of rest because of the protection it affords them from the world they fear and cannot understand. A hallucinated drunkard, without friends with enough sense to comprehend his danger, afraid of himself, and powerless against the world, would welcome a military industrial home, and to such a place this class would speedily go if an avenue was opened for them. The theory in law that "drunkenness aggravates the crime" is in harmony with the moralist's views who says inebriety is yielding all restraint and giving up to the meaner passions without regard for law or order, and that inebriates should be punished and placed in the same category of moral and legal responsibility with all members of the malicious class.

It would be as consistent in many cases to teach that epileptics should be arrested, tried, and fined for having fits, or that similar treatment should be given women who have hysterics due to organic disease. The trouble lies in the lack of discrimination by the law, based upon false assumption. The taking of stimulants about the time of committing a murder is only one of the innumerable factors that lead up to the act, and statistics have shown that there are

about so many homicides every year as culminations in social conditions, or made necessary by the law of the survival of the fittest. The assumed economic principles in law that summarily deal with the inebriated need to be overhauled in the interest of the individual, society, and the tax-payer, and for the especial education of the downtrodden victims of alcoholism that results from the sins of their fathers, and other unavoidable misfortunes.

The teachings of some of the ultra people touching this question are wrong. Ignorance and misfortune may be all-sufficient reasons for a man becoming insane through alcoholism, but are no excuse for prosecuting such a being as a villain, or classing him by fines and imprisonment with villains when nothing can be proved against him but constitutional drunkenness, which may, as often does, follow, as a reaction from hot-headed sophistry in the offspring of some erratic idealist, who would, if he could, confiscate half of the interests of mankind to justify his crazy political economy, and without regard for the law of necessity in human growth. The poorhouse gathers in the decrepit, and the insane asylum those who lose their reason.

The song of American munificence is sung in all its variations as reflected from her State humane institution. Wise legislators assemble, and in God's name exercise their high prerogatives, hoping to shine as immortals for good deeds done for humanity.

While this vast pageantry dazzles the world and should be celebrated in part, at least, as a legislative humanitarian act of recognizing the patients of the State in their last stages of fatal disease, seldom is a legislator heard to speak in behalf of humanity by proposing measures to prevent disease. Physicians assemble in their society halls throughout this vast land, and late in the night, by the light of honest toil, with heads and hearts tuned to the true nature and needs of the human family, discuss preventive measures for contagious diseases, insanity, inebriety, and depravity. When a great truth has been proven it is salted down all along the

line for individual use for caring for the unfortunate. Upon the statutes of the medical profession are thousands of great truths with which the medical profession is knocking at the halls of legislation in the spirit of magnanimity and in the interest of better laws. When these truths are discussed to the representatives of all the wisdom incarnate, so to speak, heretofore they, the truths, assume the problematic proportions of a railroad scheme, and when sifted down to the basis of humanity and when found void of stock interests or corners on the market, the august "owlishly," and therefore blandly, declare the "scheme unfeasible."

The drink question will ever be the greatest one in reform work, from the very nature of human growth. The question is not how can some individual or sect promulgate a temperance scheme to which the masses will conform, nor is it to oppose the sentimentality of good society — though sometimes wrong relating to drink — but it is to define the relation between the State and her inebriate subjects, and then legislate economically for the greatest good to society by making wise provisions for the individual drunkard under a military and industrial system, as society clearly has the right to do and as it is its recognized duty to do.

The law that brands men as common criminals when they have been thrice convicted for petty crime associated with drunkenness, and authorizes their arrest on sight would have pointed to popular legislation had it provided that upon the third conviction for drunkenness, etc., the so-called criminal should be restricted in a military and industrial institution of the State for a term to be determined by the law and the facts of the case. There are over one million arrests in this country for drunkenness, and over one thousand in Cincinnati yearly. Study the usual course of latent inebriety as it becomes active through tippling. Drunkenness in time brings to light all the viciousness of the case and is characterized by mild or aggravated crime, otherwise it exposes a negative constitution, characterized by mental and physical incapacity bordering on imbecility. Both classes

become aliens. The former, restless, emotional beings, utterly lost to social and moral considerations, finally reach a culminating period in their career, when in a crazed state of mind, favored by environments, they stealthily commit some outrageous act, or deal a murderous blow for some trifling or imaginary reason. The whole story is understood of the passive class when arraigned for insanity, with no damaging history but that of drinking.

The one class feeds the workhouses and penitentiaries and gallows ; the other private and public insane asylums. The regularity with which the consecutive steps are taken from tippling to open criminal life, or high crime, or to uselessness in society or insanity, by those that are damned by drinking to their ruin, together with the sorrow, loss, pain, and state of expense incidental to the careers of this class, stamp one fact as fixed: that is, in the interest of society and the individual drunkards, and to discharge an obligation to posterity for the inheritance we are, the State's duty is to arrest by wise legislation the career of drunkards before they become notorious aliens and criminals or worthless imbeciles, free to propagate their disease. What can be prevented does not have to be endured. Let the legislators turn their attention to the root of these evils reflected by the history of a majority of drink victims of over-crowded workhouses, penitentiaries, and of asylums for the insane, and verify the adage "That it is too late to lock the stable door," etc., by the passage of laws within the limit of safe diagnosis and prognosis; that will arrest in growth the tendencies intensified by drunkenness that fill the land with crime and burden every home with sorrow. In imitation of some Eastern States, a bill looking to better legislation for the management of inebriates has been drawn, and the legislature will be asked to pass it this winter.

LAWS are in force in forty States of the Union requiring instruction in all common schools on the use and abuses of alcohol.

INEBRIETY FROM A MEDICAL STANDPOINT.

By E. F. Arnold, M.D., Brooklyn, New York.

Prominent among the grave social problems of to-day is the growth of the disease inebriety. Public interest in the subject has been shown for years by the many temperance reform organizations, and more recently by the formation of a political party whose primary idea is the suppression of intemperance by legislative enactment. It must be admitted that thus far these movements have been more or less failures. The reason for these failures is obvious. The inebriate has been regarded as an example of moral depravity, and the efforts to reform him have been in the line of appeals to his better nature. These waves of public sentiment served to produce an emotional crisis among inebriates. Names on pledge lists swelled to magnificent proportion. Hope waxed high, only to wane when it was found that the majority of these penitents had fallen into a worse condition than ever. This is the natural result of any method which appeals only to the emotional nature of the man, and fails to relieve his physical sufferings.

During the past few years the attention of the public has been drawn in another direction. Shrewd advertisers have assured the public that a panacea has been discovered almost equaling in potency the Elixir Vitæ. The inebriate was infused with new life and new aspirations, and he was assured that it would be impossible for him to recontract the habit.

Sufficient time has elapsed to allow us to judge of the merits and disadvantages of these systems. Many have been reformed, indeed; but many not only have not been relieved, but have soon after taking the treatment become suicides or lunatics. Eleven cases reported by the *Medical Record* as inmates of one insane hospital, following this treat-

ment, are too many to be explained by coincidence, or predisposition to insanity induced by alcohol.

Inebriates may be divided into three general classes.

1. The steady drinker, seldom or never becoming intoxicated.

2. The outgrowth of Class 1, associated with periods of intoxication. An effort to reform is made, but the physical deterioration so weakens the will that frequent excesses occur. These conditions become worse, and the debauches more frequent and more prolonged. A general breaking down of the whole system follows, and the victim dies directly from chronic alcohol poisoning, or ends his days in a mad-house.

3. The true periodical or dipsomaniac forms a separate type, in which the law of heredity is strikingly illustrated. A study of family history usually reveals in the ancestry either chronic alcoholism or some grave form of nerve disease. A congenital weakness of the nervous system in the offspring results. Once the desire for alcohol or other narcotic becomes developed, the effect is overpowering.

The action of alcohol on the system is that of a narcotic poison, capable of producing death, with symptoms of brain congestion and coma so closely simulating apoplexy that there is hardly a hospital in the country which does not contain records of cases in which the correct diagnosis was made only on the *post-mortem* table.

The immediate effect of a moderate amount of alcohol is a feeling of increased vigor. Ideas are increased in quickness, but lose in concentration. The system soon demands the stimulant more frequently. Abstinence is followed by suffering. The hand loses its steadiness, the brain its clearness. Insomnia adds to the drain on nervous forces, and the patient instinctively resorts for relief to the poison which is the direct cause of his condition. In time these symptoms become intensified, and evidences of chronic degenerations manifest themselves. Scarcely an organ in the body is exempt. Alcohol in the stomach retards digestion by

paralyzing terminal nerves and by a chemical action on the pepsin of the gastric juice, produces changes in the secretions of the liver, and vitiates the processes throughout the whole alimentary tract, by causing a perverted action of the sympathetic nervous system. Partially digested food passing from the stomach to the intestines becomes subjected to abnormal fermentations. As a result, poisonous products designated by modern chemists as ptomaines and leucomaines are formed. Elimination is retarded by alcohol; consequently these products are absorbed into the system, and an auto-poisoning results. The lungs and skin undertake to assist in relieving the system of effete material, as shown by the peculiarly disagreeable odor of breath and perspiration persisting for days after the cessation from the use of alcohol. These patients will be found to suffer from chronic catarrh of most of the mucous membranes, notably the stomach, and chronic liver and kidney changes leading to cirrhosis and Bright's disease. Degeneration and resultant weakening of the walls of blood vessels predispose to rupture (usually in the brain), producing apoplexy.

A few words as to the reasons of failures in the so-called "Gold Cures" may not be amiss. The attempt has evidently been made to supplant by another narcotic action the narcotic effect of the alcohol to which the patient has been accustomed. By this substitution it was hoped that the craving for stimulants might be destroyed. Symptoms described by the subjects of two of the most prominent "Cures" are almost identical. The parched mouth and throat, impaired vision from dilatation of the pupil, confusion of ideas, loss of memory, with the depression and suffering of the first few days while under the full effect of the drugs, shows plainly to the physician that the train of symptoms is due to the action of an alkaloid derived from one of the more powerful vegetable narcotics. The system most widely known in this country has received the unqualified condemnation of the Society for the Study of Inebriety in London.

The fatal mistakes in these cures have been of various natures. The first mistake is made by attempting to cure a chronic disease by the use of narcotic remedies and by the substitution method. The second is in putting a secret remedy into the hands of physicians who are ignorant of the formula they are using, and who are hired only because the law requires that the treatment shall be administered by a graduate in medicine.

The third mistake is in the indiscriminate selection of patients. Many apply for relief who are, in addition to inebriety, suffering from grave forms of organic disease. They are not fit subjects for such treatment until these troubles shall have received proper attention, except such cases as can receive appropriate treatment in addition to that suitable for the cure of the alcoholic disease. The number of patients becoming insane so soon after leaving these "Cures" is to be explained by this indiscriminate selection of cases. The writer has personally known of patients showing positive symptoms of general paresis who have applied for treatment for inebriety. To accept such cases is to invite disaster. In order to adopt a line of office treatment which shall be at all successful, it is necessary to bear in mind the fact that certain cases, if curable at all, are only so by prolonged residence in an institution under proper restrictions and in receipt of proper medical care. Under such conditions many otherwise hopeless cases may in time recover.

There remains a larger class, at most times capable of transacting business, and who, while unable to overcome the drink habit unassisted, seek aid to enable them to do so. The question arises, How shall we best treat them? Shall it be by the use of narcotics powerful enough to overbalance an intellect already on the border line of insanity? To answer is to condemn. This plan is illogical, and is undeserving the sanction of any honest medical men. An extensive experience with these cases has shown the writer that, if treated intelligently, on lines governing the physician

in the treatment of chronic nervous troubles, satisfactory results may be obtained. The administration of remedies belonging to the tonic and restorative classes is, as a rule, promptly followed on the part of the patient by a voluntary cessation from the use of alcohol. The majority of cases will, if shown that the sudden withdrawal of stimulants does not produce the depression they dread, refrain from alcohol from the beginning of the treatment. With them the improvement is almost immediate. Appetite is quickly restored, insomnia is replaced by restful sleep, tremor promptly disappears, in emaciated cases gain in weight is rapid, and general improvement in health goes on without interruption.

The writer contends that the physician who has the tact and patience to treat successfully chronic nervous diseases can treat inebriety successfully. The error is too frequently made (in practice, at least) of failing to recognize that we have here a real disease requiring both medicinal treatment and the use of those rarer mental and moral qualities on the part of the physician by which he inspires his patients with perfect confidence and trust.

THE statistics of inebriety based on returns of police courts are open to many sources of error. Police magistrates and policemen vary widely in their practice of arresting and punishing persons intoxicated. In some instances public sentiment favors th earrest of all persons found intoxicated. Officers and judges often show great severity or leniency. In some towns an inebriate is seldom arrested unless he commits some "criminal act." Judges dismiss such cases with a small fine or promise to remain sober. In others, all drunkards are arrested and both fined and imprisoned with strictness and severity.

OVER two hundred articles on alcohol and opium inebriety are noted in the *Index Medicus* for the past two years. This gives a good idea of the growth of the literature in this direction.

SKETCH OF THE LATE DR. THOMAS LEE WRIGHT OF BELLEFONTAINE, OHIO.

By T. D. Crothers, M.D., Hartford, Conn.

Dr. Thomas Wright was the father of the subject of our sketch, and came from the north of Ireland to this country in 1817. His ancestry was Scotch and Irish. After receiving his medical degree from the Glasgow University he entered the government service and came to Quebec as surgeon on a ship. Resigning, he entered upon general practice at Craftsbury, Vt. Later he married a daughter of Dr. Huntington, a very prominent physician of that time. A few years after he moved to Ohio, living for some years in the Western Reserve, and finally spent the remainder of his life in Cincinnati. He was prominent as a physician and politician, and an ardent follower of Campbell, the famous Baptist pioneer of those early days. He left four children, who all became prominent men.

Thomas Lee Wright was the second son, and was born in 1825 at Windham, Portage County, Ohio. He was educated at the Miami University, and received his medical degree in 1846 from the Ohio Medical College at Cincinnati. As a boy and student he was noted for the thoroughness with which he acquired knowledge. Each topic was clearly understood and had a fixed place and meaning to him. Soon after graduation he settled at Kansas City, and was government physician to the Wyandotte Indians until 1854. In 1855 and '56 he was appointed to the chair of theory and practice at what was called the Wesleyan University at Keokuk, Iowa. In 1846, soon after graduation, he married the daughter of Dr. A. H. Lord, a noted physician of Bellefontaine, Ohio, and in 1856 he gave up his professorship and settled in Bellefontaine, the home of his wife, where he spent

the remainder of his life. In 1880 organic disease of the heart appeared, and Dr. Wright practically withdrew from all active service, spending his time with his books and the cultivation of a garden. In 1888 Dr. Wright was a delegate from this country to the International Congress for the Study of Inebriety in London, England, and after the close of the Congress made an extended tour through England and Scotland. He died suddenly at his home, June 22, 1893. He was in his usual health up to the past year, from which time he complained of general exhaustion, and, although going about, did not continue his usual literary work. His wife and two sons, one a lawyer and the other a physician, survive him. This brief record of his life leaves out all the struggles and triumphs that fill up many long years of active professional work. Beginning on the frontiers as friend and counsel of the pioneer settler and Indian, and constantly placed in positions requiring the exercise of the greatest skill and judgment, he early developed an independent mind and way of thinking which was apparent in all his life and writings. As a teacher in a new college, and, finally, as a family physician in the beautiful village and city of Bellefontaine, he was always recognized as an original man, whose conclusions were based on broad common sense principles.

Dr. Wright's real work was far beyond the circle of his daily professional duties. For over thirty years he was actively occupied, and his influence became a marked power in the community. Then, by one of those most inscrutable events, by which an apparent loss is turned to the greatest blessing, he was forced to give up active practice, and this was followed by opportunity and leisure to do the great work of his life, which was, in part, gathered in his writings and published in a volume on Inebriety.

From 1848 Dr. Wright was an occasional contributor to the medical press, chiefly dealing with medico-philosophical subjects. Some of his papers, "On Phases of Insanity," "Education and Its Physiological Relations," "Deterioration of the Race on this Continent," had a wide circulation and attracted, for a time, a great deal of attention.

In 1879 he appeared as a writer on inebriety. A short article in the *Lancet Clinic* of Cincinnati, "On the Action of Alcohol on the Mind and Morals," established his reputation as an author in this field. In 1880 he became a member of the American Association for the Study and Cure of Inebriety, and always after until his death contributed a paper at each annual meeting, and was a frequent contributor to THE JOURNAL OF INEBRIETY. From this time everything he wrote on this subject attracted much attention.

In 1885, through the urgent advice of friends, he published a volume entitled *Inebriism, A Pathological and Psychological Study.* This volume, of two hundred and fifty pages, has been translated into the French, German, and Russian languages, and is regarded as one of the most valuable contributions to this subject made by American physicians. From this time to his death Dr. Wright has been a constant contributor to the various phases of inebriety, especially on the physiological action of alcohol on the brain. Most of his papers have taken a permanent place in the literature of the subject.

His studies have been particularly confined to the action of alcohol on the mind and brain, and some of the medico-legal relations which would follow. He was among the first in this country to urge the fact that alcohol was a paralyzant, and that from this point of view all the phenomena of intoxication were clear and unmistakable. He carried the subject farther than Dr. Richardson of London, who, in his *Canton Lectures*, called attention to certain general paralyzing effects of spirits, but failed to make a full physiological study of the various phenomena of intoxication. Dr. Wright seems to have had a somewhat remarkable conception of the various stages of paralysis and the special action of alcohol on the functional brain activities of inebriates. Starting from a higher point of view than other writers, he carried his studies down to more minute ranges, and described the symptoms of the disturbed brain when overcome by the action of spirits in the clearest and most convincing terms.

Some of his studies of the confusion of the senses and the delusions which follow after the use of spirits are almost classical in their graphic setting. One of his papers described the irritation and disordered functioning of the brain and the growth of illusions and delusions in homicidal alcoholism, which was the basis of two lectures and a subsequent book by Dr. Mynert of Hague, Holland. A brief chapter in his book on Inebriism, showing the philosophy of defects in moral faculties of inebriates, has been incorporated into many volumes and lectures, some of which have neglected to give the author the proper credit. Many of his later papers have given very graphic pictures of the physiological and psychological forces at work in the etiology of inebriety. One on trance and trance alcoholic states suggested some new lines of study, which has been greatly extended by Dr. Barriets of Paris and others. Dr. Wright's first papers and works were far more suggestive than exhaustive. In many cases they were broad, clear outlines, with here and there more minute tracings. But in all there was a rare suggestiveness that stimulated inquiry and further research.

In his later papers he sought to be more exhaustive, and carried his studies into broader fields of psychological phenomena. Here he showed the same charming grasp of the subject, noted by clearness of terms and expression. Dr. Wright will be remembered longer for his studies of the paralyzing action of alcohol on the brain and nervous system. His pioneer work was along this line, although he followed up Gressinger's and Lurey's idea of a sensory and ethical brain damaged by poisons, and showed clearly that alcohol acted first on this part of the brain and finally destroyed it. He also brought out the fact that the lower and animal brain might continue with some degree of health long after the higher brain was destroyed in inebriates.

These are some of the many facts which Dr. Wright brought into the realm of scientific study. Their full meaning and import is not yet understood except by a few advanced students. Only in the future will they be fully recognized and appreciated.

Personally, Dr. Wright was a most genial man; an optimist whose radiant faith in the final triumph of right gave color and brightness to all his life. As a companion on a foreign tour he lived above all the vexations of travel, and saw the humor and romance of each day's events. He was a keen observer of the follies and weakness of human nature, and formed very clear conceptions of men and events. While never contradicting any statement of others, he was quick to discern the errors and very charitable to excuse the motive for such statements. A blustering, arrogant critic, who condemned his views very severely, was astonished to hear him reply "that such views showed great zeal and earnestness," then go on to repeat and explain what he had said before.

While Dr. Wright was naturally a retiring, unobtrusive man, and seemed not to be greatly interested in the every-day affairs of politics, religion, and social life, he was a very keen observer and possessed strong convictions on all these topics. He was a devout believer of evolution and growth in both mind, morals, and body, and the doctrine of right living and correct character was a central point of his life. Above all this personality as a physician and man, above his influence on the generation he lived and worked among, his real life work was in opening up a new region of facts and pointing out new lines of study that will be followed far down into the future.

The work of Dr. Wright for the past few years was that of a pioneer far beyond his day and generation. He saw more clearly than others the operation of certain physiological and psychological laws, and in describing them suggested other fields of study of the greatest interest not yet occupied. Death not infrequently brings into prominence traits of character and virtues not clearly recognized before. This was not so with Dr. Wright. For years his acquaintance and correspondence with eminent men and frequent notice in scientific circles showed that he was known and appreciated. After his death the obituary notices in the daily papers of

his own town and State elsewhere, with the eloquent remarks of distinguished clergymen at the funeral, were additional evidence of the great influence and high esteem with which he was regarded by his neighbors and friends. Among scientific men, the conditions and environments of life are not so sharply reflected in their everyday work. Often they may appear more dull and indifferent to the influences of the hour, but behind this a higher ideal life and conception of truth and duty are apparent. This was marked in Dr. Wright and his work, in which he sought to make clear some central truths that would help on the solution of the great drink problem. How far he succeeded will be determined in the coming century. But to-day we look out over his life work just closed and feel conscious that a great soul has been with us who has caught glimpses of facts and laws which govern them and traced out a few outline truths for others to follow ere he passed away.

"He has passed on to join the mighty souls of all times that linger o'er us,
Those who labored like gods among men and have gone,
Like great bursts of sun on the dark way before us,
They are with us, still with us, our battles fight on.
Looking down, victor-browed, from the glory-crowned hill,
They beckon, and beacon us on and onward still."

At a stated meeting of the American Association for the Study and Cure of Inebriety Dr. Crothers offered the following preamble and resolutions, which, after many commendatory remarks, were passed unanimously:

WHEREAS, The death of Dr. T. L. Wright of Bellefontaine, Ohio, has removed from our ranks a pioneer whose genius and industry gave him unusual prominence, and whose studies of inebriety presented before our Association and appearing in THE JOURNAL OF INEBRIETY, endeared himself to every student of this new field of psychiatry; therefore, be it

Resolved, That in his death we have sustained a personal loss of one whose studies of the action of alcohol on the brain

has been followed with the deepest interest. As an original worker along new frontiers, he has opened up new fields of study with new facts, that will go down into the future as monuments and starting points for the explorer of the coming century.

Resolved, That we extend to the family of Dr. Wright our sincere sorrow and condolence, with the assurance that the personal grief so keenly felt by those nearest to him is shared by each member of our association and all who have been helped by his fertile and suggestive studies in this great new land of scientific study. That a copy of this be placed on file in our transactions and also be transmitted to his family by the secretary.

THE BRITISH MEDICAL ASSOCIATION. — The association has an active committee on inebriety and legislation, at the head of which is the eminent physician, Dr. Norman Kerr. A circular has lately been issued advocating strenuous laws for the management of habitual inebriates. Three or more learned societies, numerous magistrates, chaplains, and other persons interested in reformatory, rescue, and preventive work, have strongly advocated: 1, power to compulsorily seclude habitual drunkards in special curative institutions; 2, curative seclusion for poor diseased inebriates at the public charge; 3, a removal of the existing hindrances to the immediate reception into a retreat of an inebriate voluntarily applying for admission, involved in an appearance before two justices. "The Home Secretary having promised to receive a deputation and to introduce a bill into Parliament based on the suggestions of the departmental committee, I am instructed to earnestly appeal to all Christian ministers to petition or memorialize the Home Secretary or the House of Commons in favor of this amended legislation, so loudly called for in the interests of the helpless victims themselves, of their distressful wives and families, and of the general community."

PROMISED EFFECTUAL BRITISH LEGISLATION FOR INEBRIATES.

By Norman Kerr, M.D., F.L.S.,

President Society for the Study of Inebriety; Chairman Inebriate's Legislation Committee of the British Medical Association; Consulting Physician, Dalrymple Home.

The literature of inebriety grows apace. More and more in each succeeding year does the physical aspect of intemperance, does the disease origin of most of the manifestations of drunkenness, assume a "real presence" to the scientific and reflecting mind.

The treatment of drunkards for ages past, having been based on incomplete knowledge of the true character of the phenomena of intoxication, has prevented the general public and the philanthropic worlds of humankind from seeing, amid the mental mist of the centuries, more than a faint glimmer of one of the great pathological discoveries of the nineteenth century, that inebriates are not all willing sinners, are not all willful criminals who started in adult life with a resolute determination to break forth beyond the lines of temperance, moderation, and self-restraint of appetite.

Yet the world moves. Who, thirty years ago, in Britain, could have dreamt that, little more than a quarter of a century afterwards, one of the ablest, most deliberate, and most judicial members of the British cabinet would have accepted a result of modern medical research in inebriety as the basis of a legislative proposal which involves a revolution in state-dealing with this tremendous evil of the most far-reaching kind?

Yet, on the 5th of December, 1893, in the rooms of the Secretary of State for the Home Department, the present talented holder of this high office, Mr. Asquith, stated to a joint deputation from the British Medical Association, the

Society for the Study of Inebriety, and the Homes for Inebriates Association, that this was his intention in the parliamentary session of 1894.

I had the honor to call the Home Secretary's attention to the terrible amount of female incurables (sentenced over ten times) in the United Kingdom, which had reached the highest total ever reached, of no fewer than 9,048 during last year, notwithstanding the enormous diminution in crime represented by an average daily aggregate of criminals detained in prison of the remarkable number of 10,000.

Supported by three distinguished church dignitaries, an ex-judge, the president of the British Women's Temperance Association, the secretary of the Reformatory Union and Discharged Prisoners' Aid Society, a number of lawyers, we asked for compulsion in the case of confirmed drunkards, and the right honorable gentleman conceded the validity of our claim, and gave us the promise of a bill.

Further, in response to our representations, he promised us the inclusion of some provisions for poor non-criminal inebriates, and for some legislation for the treatment of inebriate criminals, not necessarily in the cells of a prison, but, if possible, in the wards of a curative reformatory or other therapeutic institution. Of course, in the case of non-criminal inebriates, the liberty of the subject would have to be thoroughly safeguarded, and the curative procedure with criminal inebriates would have to be carefully considered as to cost and practical methods of operation.

I took occasion to call attention to the fact that, as I had always set my face resolutely against public agitation on this scientific question, the general consensus of scientific and intelligent public opinion which, twenty-five years ago, was dead against us, had the issue of persistent appeals only to the reason and intelligence of the thoughtful of the population.

For this happy promise of thorough legislation we are greatly indebted to the splendid work of the lamented Joseph Parrish and T. L. Wright, your influential Society for the

Study and Cure of Inebriety, and your QUARTERLY JOURNAL OF INEBRIETY with its indefatigable Editor, T. D. Crothers.

Let me conclude with the expression of a hope that, as America began with Benjamin Rush to urge the curative care of drunkards as diseased individuals, if Britain first enacts a general measure for the gratuitous treatment of the poorest of poor drunkards, this will be an Anglo-American alliance of the noblest, the most enduring, and the most beneficial kind, both for the present and for posterity.

SOME STATISTICS.

Rev. Canon Farrar of London asserts in a recent lecture that within a quarter of a century over four million persons have been arrested in England as inebriates. That these figures do not represent more than one in twenty who use spirits to excess. In fifteen workhouses in England every inmate came there from the influence of excessive drink. Chief Justice Coleridge declares that nine out of every ten jails would be closed in England if the drink traffic could be suppressed. Another judge affirms that four-fifths of all crime is directly due to the use of alcohol. In 1890 thirteen hundred children were reported as dying from being overlaid by their parents. In each case intoxication was the cause of it.

From the clippings of English newspapers for ten days there appeared four hundred and sixty cases of crime caused directly by excess of spirits. He concluded by asserting that the drink problem was the most important social and physiological problem of the century.

THE English judiciary statistics state that in 441 murders from forty to fifty per cent. of all the murderers were found to be either insane or suffering from great mental infirmity. In ten cases of murder where the murderers were inebriates, six were found insane, three were imbeciles, and one was mentally very weak and erratic.

ALCOHOL AS A CAUSE OF UNCHASTITY.*

By M. L. Holbrook, M.D.,
Editor Journal of Hygiene, New York City.

I am asked to give some thoughts on the relation of alcohol to social and sexual vice and unchastity. It is a somewhat difficult task. Nevertheless, something can be learned from history, something from the study of biology, and something from such observations as students must make in the study of sociology, a science as yet almost in its infancy.

Biological studies teach us that the character of the blood influences in a remarkable manner the character of the thoughts, feelings, and impulses which are generated in the brain. If this fluid is abundant and of a normal character, a joyous feeling fills the whole being, and there is a fullness of life, whether the person is rich or poor, cultured or uncultured; the thoughts and emotions are then more likely to be pure and good, rather than evil. If there are exceptions, we need not here consider them. Then work is a delight, and weariness does not come from long continued toil. If, on the other hand, the blood is deficient in quantity; depraved in quality, and does not circulate properly, the most abnormal mental and moral manifestations may take place. There is then no joy in the heart, nor such fullness and richness of life as ought to be the lot of every animated being, and particularly of every human being. Work, whether physical or intellectual, drags the person down, and every weight, however small, may become a burden.

If in this case the temperament and constitutional tendencies of the person be to vice or crime these phenomena occur at least far more readily than when the tendencies and

*Read before the World's Congress Social Purity, in Chicago, May 27, 1893.

habits are good and the blood is pure. This is the teaching of experience and also would seem to be in accord with reason.

The same thought is practically expressed in the Bible, when it says the blood is the life, and while this is usually interpreted to mean the physical life, it might also be construed to mean the kind and degree of moral, intellectual, and spiritual life. They are all influenced by the character of the blood, and this is influenced by the character of our food and drink, as well as by the vigor of the digestive organs. It cannot be otherwise. If we consider the anatomical structure of the nerve ganglions or so-called cells that go to make up the brain, we find that a capillary carrying a stream of blood passes close to each brain or other cell, and gives to it a little of the serum containing such nutriment as has been made from the food taken. If we imagine a boat at the dock, unloading a part of its cargo, we can see in our mind's eye, readily, how a nerve cell is supplied with its pabulum, excepting that the blood does not stop at the brain cells but gives off its portion while still in motion.

Now, if the blood is loaded with alcohol, some of it passes with the serum directly into and around the cells. Its effects on them, in producing mental or physical manifestations, will depend on the amount of alcohol and upon the temperament and character of the person.

There are two classes of effects, one the physical effect and the other the psychical.

The physical effects are paralyzing.

The psychical effects are stimulating to activity.

The psychical effects are immediate, or nearly so.

The paralyzing effects come later, and after the alcohol has had time to penetrate all the tissues of the body and exhaust their natural irritability.

The psychical effects vary with the individual. I have known a sentimental, religious man to pray powerfully under the influence of alcohol. The prayer would not be a logical one, nor altogether rational. I have known a preacher who

was in poor health and dissipated take a little whisky just the right time before his sermon, and think he never preached so well. I once knew a temperance lecturer who took the same means to lash into action his intellectual faculties, jaded by overwork, insufficient sleep, and unsuitable food. That our politicians and statesmen do the same thing is notorious. Alcohol also sometimes opens the heart and may make one benevolent. Business men understand this, and when not swayed by ethical sentiments, gain advantage over customers by first giving them wine. Brutus says to Cassius, "Give us the bowl of wine, and we will forget all unkindness."

But if alcohol stimulates to activity the moral and intellectual faculties, as it does in some temperaments and conditions, it in a far larger degree excites those functions which we call lower, and especially the combative and also sensual tendencies. The reason for this is that these functions are in a majority of persons more exercised and more easily brought into activity. Their condition is one of greater unstable equilibrium. There is no doubt more blood sent to the centers that produce them. The result is that fighting and brawling have ever been associated with intemperance, and wine and women associated in song. Socrates hints this when he says to Critobulus, "Suppose we desire to choose a worthy friend, one on whom we can always rely, what would be our method of procedure in this matter? Should we not beware of one much addicted to high living, to wine and women, or of a lazy disposition, since enslaved to such vices, no one can be of use to himself or to another."

. . . . . .

One word more and I will close. Some of our modern writers have recently hinted that the race is not improving as fast as it might. Even Darwin, that most hopeful of men, intimated that in our age the law of natural and sexual selection has been set aside to a very great extent, and that the vicious and intemperate and incompetent are leaving more descendants than is compatible with the interests of

the future. Other writers have hinted at remedies which are not only unpracticable, but some of them almost revolting. Mr. Alfred Russel Wallace has, however, put forth some suggestions which are certainly worthy of consideration. He believes the time has come when man may take a greater interest in his own improvement through what he calls "human selection," which I take it is, in part, at least, to supplement natural and sexual selection. I cannot enter into his argument here, but one of his strong points is that women should decline to marry men who are intemperate, impure, and sensual, demanding that they shall be pure and strong, and that men shall act in the same way in their choice of wives. If we reason from analogy, this certainly would give us a better race of men and women in the future. We know that alcoholic drinks indulged in by either sex to any considerable extent promotes sexual excesses, and we know that it may saturate the germs which are to produce a living being, and that either of these things tends to lower not only the chances for begetting the best children, but sometimes gives them a bias to evil which is truly appalling. In view of this fact, we will not go far wrong when we insist that the future fathers and mothers of the race, if they wish, as indeed they will, to give to the world nobler sons and more queenly daughters, shall themselves be pure, strong, and noble in the highest sense in which we can use these words.

Dr. Corre of the military service of France thinks forty per cent. of the crime and bad conduct comes from inebriated degeneration of parents. Dr. Virgilis of Italy says thirty-two per cent. of all the criminal population have inherited criminal tendencies direct from their parents. Both authors state that the excessive use of spirits in parents is the fruitful cause of criminal conduct in the children.

Abstracts and Reviews.

THE TREATMENT OF INEBRIETY.

How to deal with inebriety is at present one of the most important questions in State Medicine. Medical men have for some time recognized inebriety as a diseased condition; the Society for the Study of Inebriety has thrown much light on the varieties of the disease, and the public, whose opinions formed themselves somewhat slowly on those of the medical profession, are becoming alive to the importance of treating this diseased condition. Few medical men but have been asked within recent years to recommend some institution where inebriates, male or female, could be treated. The Inebriates' Acts are still hard to work, and although the number of cases taking advantage of them is increasing, the fact that only 124 were admitted into retreats during 1892 shows how very little they are used. The fact is that, owing to a strong desire to protect personal liberty, so many checks have been introduced, the Acts are well nigh useless. The evolution of legislation for inebriates is the converse of that of legislation for lunatics; in the latter case the checks were at first wanting, and have gradually been added; in the latter so many checks have been imposed that many must be altered or removed before the Acts become workable. The pendulum swings in opposite directions, but in each case equally far from the happy mean; and at present it is easier to consign a lunatic against his will to what may be lifelong imprisonment than to lock up an inebriate at his own request for a year. What is most wanted is that the State should take the matter up and provide homes where inebriates could be treated at the public expense. Too often an inebriate has not sufficient means to admit of his being placed in an expensive home, and curable cases are allowed to run on from bad to worse, while their homes are disorganized and

those depending on them are dragged down. State homes not being worked for profits, the rules for admission might be simplified, and cases being got at an earlier stage, a larger proportion of cases might be expected. Personal consent should not be required ; the weak, easily affected people, who are good with the good, and bad with the bad, would be most likely to consent, and they are the class whose cure is most doubtful. Those whose moral sense is not quite blunted do not like to admit their condition, and nothing but a compulsory Act will bring them under treatment. The period of treatment ought to be extended ; inebriety is a disease which requires time in its treatment, and with time its treatment is often surprisingly successful. The nervous system, even when profoundly affected by alcohol, sometimes becomes suddenly improved, and apparently hopeless cases are cured. There is also, however, the reverse side ; hopeful cases often relapse, but length is a powerful factor in treatment. Treatment should be directed to the physical condition ; to try and cure the "drink craze" by drugs is unscientific, and the attempt has never been successful ; on the other hand, when the physical state is treated and the various organs are nursed into health, the nervous system becomes strengthened and there is good hope of cure. Prison treatment fails in this way, underfeeding is added to compulsory total abstinence, and discharged prisoners are feeble, easily tired, and in the very condition in which the temptation to take drink is strong, and in which the power of taking it in moderation is weak. The patient treated in an inebriate home is in a very different condition — he is well fed, has had healthy exercise in the open air, and so the physical temptation to take stimulants is not present. At present about one-third of the cases treated in inebriate homes do well ; with an extension of the system, earlier treatment, and the wholesome fear of a second committal, the percentage of cases would be sure to rise. The homes would also be the source of valuable clinical instruction to medical men, who are now expected to treat one of the most complex of conditions without any special instruction. — *Medical Press.*

ALCOHOLIC NEURITIS.

In *Deutsches Archiv. f. Klin. Med., Bd.* 50, Dr. O. Reunert has an article on this subject based on the observation of twenty-five cases, about three per cent. of the total of alcoholic cases treated. An autopsy was made in five cases. Four groups of cases were represented: (1) Typical polyneuritis, thirteen cases; (2) Localized muscle paresis and atrophy, four cases; (3) Slighter forms without pronounced paralysis and atrophy with disturbances of sensibility, sensation of pressure on nerves and muscles, or anomalies affecting the reflexes, six cases; (4) Cases with marked participation of the ocular muscles.

The complaints in the commencement of the disease were rheumatic pains, heaviness and stiffness of the limbs, generally in the lower first, but twice affecting the upper extremities, increasing weakness, pains in the calves of the legs, muscæ before the eyes, and over diplopia. Pains were only to be considered as pathognomonic of the disease when associated with a feeling of pressure on the nerve trunks, and of the muscles. These symptoms assumed greater importance when anomalies of the reflexes, especially the patellar, are also present. Disturbances of sensibility in the form of hyperalgesia which frequently accompanied chronic alcoholism not characteristic of neuritis. About thirty-three per cent. were delirious, or became so shortly after admission. During the course of the disease or at its commencement, psychical disturbances were very frequent (feebleness of intellect, restlessness, sleeplessness, dementia, hallucinations, and imbecility). These only continued till death in two cases. Rapid improvement of excessive psychical disturbance with the character of dementia were in favor of the disease being alcoholic in its nature.

One of the most frequent complications was tuberculosis. Alcohol and tuberculosis were apparently common causes of nerve degeneration. The prognosis of alcoholic neuritis, not in itself unfavorable, was rendered almost lethal by tubercu-

losis. Amongst the nervous symptoms ataxia was to be named first.

The electrical behavior was very varied, sometimes quite normal, and at other times atrophy of muscles accompanied distinct diminution of electrical reaction. Sometimes this was absent altogether, as was that of degeneration. As regarded disturbance of sensibility, the mildest forms were almost exclusively of a neuralgic character. In combined alcoholic and tubercular disease sharp pains were generally present. Hyperalgesia of the skin was very rare. The tendon reflexes were generally weak or absent altogether. In convalescence the patellar reflex returned slowly. Exaggeration of it was observed by Strümpell and Möbius. The cerebral nerves might be diseased. A relatively large number of neurotics suffered from disturbances of vision. As vaso-motor disturbances, the author observed a tendency to sweating and œdema. Temporary cyanosis came on in two cases. Bowel or bladder troubles were generally absent or fugitive. As regarded the anatomical condition, the author confirms the opinion of Strümpell as to the simultaneous commencement of both central and peripheral changes. As regards this, Dr. Westphal gives a report of an autopsy of a case in the "Charité Annalen."

The patient, a man, æt. 28, who drank to excess, showed atrophic paralysis of the extremities, disturbances of sensation, œdema, marked deposits of fat, occasional fever and dementia. These symptoms gradually improved. Five years after the commencement of the disease the patient died of phlegmon of the perinæum. The autopsy showed slight poliamelitis anterior chronica, with participation of Clark's columns, advanced parenchymatous degenerative neuritis resembling that described by Erb of progressive muscular dystrophia.

The anterior roots of the spinal cord were intact.—*Times and Register.*

ALCOHOLISM IN FRANCE.

Our French brethren have lately devoted a large share of their attention to important questions in which the borders of medical science trench upon those of sociology. The usefulness of Medicine to the State has scarcely yet received general appreciation. The intemperate use of alcoholic liquors has always been — probably always will be — a most important topic of consideration in Great Britain and the United States. But, for reasons which would lead us too far to endeavor to trace, in other countries, also, the increase of the drinking-habit has become a pressing question. A recent brief note in La Médecine Moderne informs us that during the last twenty years the consumption of alcoholic liquors has increased enormously, and that among the lower classes the habit is universal among men, women, and children. According to the "Lectures on Alcoholism," published by M. Villard, of Marseilles, the quantity of alcoholic liquor consumed in that city has doubled within the last twelve years. In ten years the number of drinking saloons had increased by one thousand, — out of all proportion to the increase of population. Absinthe is the fluid chiefly used. It is remarkable, says M. Villard, that few become drunk, but the drinkers are "alcoholized." The number of murders in Marseilles is five times greater than in the other cities of France. Insanity has also grown more common. The general proportion in France is eighteen drunkards to one hundred lunatics. In Marseilles the ratio is twenty or twenty-one to one hundred.

As at Marseilles, so at Paris, absinthe is the favorite drink, and M. Lancereaux does not hesitate to affirm that it is used as freely by women as by men. The latter authority has attempted to establish clinical varieties of alcoholism dependent upon the kind of liquor habitually consumed. He classes as ethylism the results due to wine; as alcoholism those dependent upon brandy and rum, and as absinthism those caused by absinthe and other essences. The victim of ethylism has a congested face, red nose, suffers from morning

vomiting, and often succumbs to cirrhosis of the liver. Those addicted to alcoholism are characterized by absolute and symmetrical analgesia of the lower limbs and the tendency to degenerative alterations, to the excessive deposit of fat in the subcutaneous cellular tissue, the omentum, and about the heart. The drinkers of absinthe are distinguished by convulsive attacks, which exactly resemble those of hysteria, and by symmetrical painful hyperæsthesia of the limbs and the trunk, with exaggeration of the plantar reflex. According to Charcot, the accidents attributed by M. Lancereaux to absinthism are simply hysterical phenomena provoked by the toxic agent. Charcot sums up the ill effect of drink in the graphic sentence, "Every drop of seminal fluid of a drunkard contains the germ of all the neuropathies."—*Dr. Shoemaker in Medical Bulletin.*

MEDICAL JURISPRUDENCE OF INSANITY; DEVOTED TO A CONSIDERATION OF THE LEGAL RELATIONS OF THE INSANE. By EDWARD C. MANN, M.D., author of "A Manual of Psychological Medicine," Member of the Medical Society of the County of New York, Member of the New York Medico-Legal Society, etc., etc.

This work treats of the legal enactments in reference to the insane, of insanity in general, of the various forms of insanity, and of the diagnosis of insanity in relation to civil and criminal acts. The legal and medical professions will find the conclusions of science respecting mental disorders in this work, and the results of scientific observation, of much practical value in medico-legal cases, set forth with sound judgment. The work abounds with valuable information and is pervaded by sound views, and principles of law are clearly laid down. The capacity and incapacity for the management of affairs is clearly and strongly dwelt upon. The duties of medical witnesses, the legal relations of inebriates

and the citation of cases are all carefully considered. There is a careful review of judicial opinions and practices.

The author, who possesses a well-earned reputation in the knowledge and treatment of nervous and mental diseases, has written so clearly and concisely on the grave and delicate question of the medical jurisprudence of insanity that the judiciary and the legal profession can, by aid of this work, make that careful and impartial investigation of the plea of insanity proper to scientific inquiries. The book will be printed in the best law-book style and sent to any address on receipt of the price, $4.00, by the publisher, Matthew Bender, law bookseller and publisher, Albany, N. Y.

ALCOHOLIC PARALYSIS.—Dr. Mossa, of Stuttgart, calls attention to alcoholic paralysis as described in Charcot's Lectures on Diseases of the Nervous System. It is especially frequent in females, from the use of liquors, essences, etc., which contain alcohol. The patient has horrible dreams, nightmare, terrible visions, disturbances of sensation in the lower extremities, especially prickling sensations, formication, stitches, and "lightning-like" pains which run through the extremity. They appear pre-eminently at night, so that the patients look to the coming of night with terror, for during sleep they are tortured with horrible dreams and hallucinations, and when awake the pains are very severe. Hyperæsthesia of the skin generally accompanies the pains, and later extends to the upper limbs. Later, analgesia of the skin follows, so that neither heat, cold, pricks of a pin, nor contact with the floor is felt. Then paralysis sets in affecting chiefly the flexors. The feet hang flaccid with the toe downwards, the toe cannot be raised, the reflex tendons are absent. The muscles of the trunk may be attacked, those of the face never. They fleel flabby, and electric excitability is reduced. The peripheral nerves and their terminations are only affected. The skin may present vaso-motor disturbances — a reddish or violet coloration;

œdema around the ankles (without albuminuria or diabetes). In other patients sweat may suddenly break out on the hands or feet, or alternate with vaso-motor changes, redness and paleness. It may be confounded at first with tabes dorsalis or diabetes. Lead paralysis is also to be thought of. Unfortunately the diabetic and the one with lead poison is often alcoholic. Therapeutically he recommends hydrotherapy, abstinence, and tonics.

THE DISEASES OF THE NERVOUS SYSTEM; A TEXT-BOOK FOR PHYSICIANS AND STUDENTS. By Dr. Ludwig Hirt, Professor at the University of Breslau. 178 illustrations. D. Appleton & Co., Publishers, New York city. 1893.

The author of this volume has been long recognized as one of the ablest writers on neurology in Germany. This translation brings to the American reader one of the best studies of this subject for immediate reference. Of the four or five volumes on nervous diseases which have appeared during the past year, this is the clearest and most direct. Each chapter is brief, well illustrated, and followed by a short bibliography. The divisions of the subject and the very pleasing methodic grouping of the various topics are the strong points of the book. Many of his therapeutic hints are very suggestive, particularly the use of electricity and baths, the latter of which is not much used in this country. The chapters on brain tumor, chorea, and cerebral hemorrhage are of more than usual interest, and open many side lines that bear directly on inebriety and its associated diseases. The work is divided into four general divisions, viz.: Diseases of the Brain and its Meninges, Diseases of the Spinal Cord, Diseases of the General Nervous System, Diseases of the Nervous System with known Anatomical Bases. Under each of these topics are grouped the best arranged and most advanced studies of the diseases of the nervous system that can be found in a single volume. The illustrations and type are excellent, and altogether this is one of the best works that can be placed in any working library.

ANNUAL OF THE UNIVERSAL MEDICAL SCIENCES: A yearly report of the progress of the general sanitary sciences throughout the world. Edited by C. E. SAJOUS, M.D., in five volumes of 500 pages each. F. A. Davis Company, publishers, Philadelphia, Pa., 1893.

This is the sixth annual of this truly wonderful work, which gives a complete record of medical science and progress all over the world. Seventy editors are associated to gather all the facts of value that have appeared in all languages, and arrange them so that each one can be readily found, and studied in the original. This is the only work in the English language that gives a complete view of medical literature for the past year. It is a library that is indispensable for every physician, and brings a mirror in bound volumes of the march of medicine. It is especially to be commended for the index which enables one to see, at a glance, all the studies on one topic for the year. Every department of medicine is covered, including all sanitation, climatology, and epidemiology, and other allied topics. The subject of inebriety is edited by Dr. Norman Kerr of London, who is one of the best-known specialists in Europe to-day. It is gratifying to our readers to know that it requires eighteen pages of this large work to describe briefly the new facts which have been presented in this field alone. This is most gratifying as signs of progress, and we assure our readers these volumes give an equally faithful picture of all other fields. Together we consider this the most valuable work of the year for every medical library.

AN EXAMINATION OF WEISMANNISM. BY PROF. ROMANES of Cambridge, England. Open Court Publishing Co., Chicago, Ill., 1893.

In this work of over two hundred pages, Weismann's theory of heredity is reviewed in the relation it bears on evolution. To those who have not followed the very exhaustive discussion of heredity by Weismann, and the equally acute

criticisms of these views, and Weismann's frank acknowledgment and change of theories, this work will be a new revelation. As an example of courteous, open criticism, and skillful presentation of both sides of the theory in question, this work is a model. The examination of the theory of the heredity of acquired characters, which Weismann denies, and the clear statement of the facts for and against it, is a most suggestive topic for all our readers. We urge every one to procure this work (costing only one dollar), and become familiar with the most recent discussions in this fascinating field of heredity. Prof. Romanes is one of the clearest writers, and this work is very readable and doubly interesting to every student of mental disease.

BROMIDE OF POTASSIUM POISONING.

Dr. Greenless has recently published several cases of poisoning from this source. The first case was an epileptic who took 75 grains a day for three weeks, when stupor, coma, and extreme prostration and death followed. The *post mortem* showed intense congestion of the meninges. Another case, an epileptic, the same amount of bromide of potassium, 75 grains a day, was given, and in ten days coma and death followed. Both the brain and meninges were congested and the kidneys were in the advanced stage of cirrhosis. The other cases were less prominent and clearly from bromidism that was the result of long use of the drug. In some cases of inebriety larger doses of bromide produces stupor and prostration, from which recovery is slow, and followed by continued prostration. It is an error to suppose that the bromides are harmless. In certain cases they are capable of causing very serious results, and should be used only for a short time in large doses. We have yet to learn many things concerning this very commonly used drug.

The Voice is the leading prohibition paper of the world. It is a pleasure to commend it for its accuracy of statistical facts and fairness of discussion. Both its editors and pub-

lishers have raised the tone of political partisanship and sought to keep close to the line of recognized facts. As an organ of a great oncoming revolution, socially and politically, and on the lines of evolution, *The Voice* is a power and should be read by all. Send to Funk & Wagnalls, New York city, for specimen copies.

The Union Signal is the well known organ of the W. C. T. U., and is undoubtedly one of the ablest journals published managed by women. Figuratively speaking, it is ringing the "alarm bell of the ages, rousing up women to come forward and assert their rights in the home and fireside, and take step with their brothers in the great evolution march of the world." Send to the Publishing House at Chicago, Ill., for specimen copies.

Blakiston, Son & Co. of Philadelphia, Pa., have issued annually for over forty-three years a *Visiting List*, which has become a standard for physicians, and is more popular than ever. It is a daily record and manual of scientific facts of the greatest value in everyday work. All physicians who have used this list find it so valuable that they continue it ever after. In size, weight, convenience, and price it is unrivaled.

We never weary of calling attention to the *Popular Science Monthly* as a magazine which becomes more and more indispensable for every physician and student of science. As a present it would be most acceptable to every reader. Newspaper readers who neglect the fields of general science cannot be familiar with the march of events. The *Popular Science Monthly* will supply this deficiency.

The Medical Temperance Quarterly, published by the Modern Medicine Co. of Battle Creek, comes in a very attractive appearance, and gives promise of being a great power in the literary and scientific world, in the future. We commend it to all our readers.

The Phrenological Journal grows with the years, and the skeptical readers of yesterday become the worshipers of to-day. Every issue contains many facts of the most absorbing interest to almost every phase of life. Send to Fowler, Wells & Co. of New York city for a year's subscription.

The Homiletic Review, Funk & Wagnalls, New York city, is a charming theological journal that brings each reader very excellent suggestive thought on the line of higher spiritual growth.

An inebriate who was sorely pressed for money signed a contract with a physician, selling his body for twenty-five dollars after his death. Later, he became a total abstainer, recovered, and by a series of good fortune became wealthy. The physician called his attention to this contract, and offered to settle for a thousand dollars. A legal suit followed in which the question of his sanity at the time of making the contract was raised. This was decided on the old theory of full responsibility and knowledge of right and wrong, against the defendant, and a compromise was afterward made, giving the M.D. five hundred dollars for his loss of a post mortem of the ex-inebriate.

A CAREFUL study of a large number of cases of inebriates will always show a larger number of physical anomalies and signs of degeneration than in others who do not suffer from the drink craze. Also a feebler and more unstable mental organism. Often a lower grade of mental development that may be retarded growth by congenital defects or disease.

THE *Belleview*, a private asylum at Melrose Highlands, Mass., under the care of Dr. Day, is one of the most attractive places for rest and restoration in the country. Write for a circular.

BEER STATISTICS.

The Voice publishes tables, showing the number of barrels of malt liquor sold in each of the States and Territories, and in the twenty-two principal cities of the United States for the seven fiscal years from 1887 to 1893. The figures are furnished by the *Brewers' Journal* of October, and the claim is made for them that they are compiled from the books of the Internal Revenue Department at Washington, D. C. The first table shows that the total sales of malt liquors in the United States for the fiscal year ending June 30, 1893, were 33,822,872 barrels. This is an increase over 1892 of 2,176,396 barrels. Nine of the States and Territories show a decrease — Alaska, California, Idaho, Nevada, New Hampshire, South Carolina, Utah, Washington, and Wyoming. Six of the States still report no sales — Arkansas, Florida, Maine, Mississippi, North Carolina, and Vermont. From the second table it is seen that but two principal cities of the United States — Boston and San Francisco — show any decrease in the sale of malt liquors in 1893 over the corresponding period of 1892. New York city takes the lead with an annual sale of 4,839,960 barrels of malt liquors, and then follow Chicago, Milwaukee, St. Louis, Brooklyn, and Philadelphia. The cities of Boston, Chicago, Detroit, Philadelphia, Pittsburgh, and St. Louis are under high license, ranging from $500 to $1,300, and yet, with the single exception of Boston, these high license cities have made gains in sales equal, if not greater, than the sales in the low license cites. The 33,822,872 barrels of malt liquors sold in the United States last year are equivalent to 1,048,509,032 gallons, or about 15.8 gallons of malt liquor to every man, woman, and child in the United States.

INEBRIATE SANITARIUMS.

The following appeared in *The Voice*, and is a sample of what is seen with increasing frequency in other publications: "Why should there not be established in all the

States public sanitariums for inebriates, to be erected and maintained by a tax levied on all saloons?

"There should be two departments in such an institution, one for the use of voluntary patients, who might pay a moderate fee or not, as they preferred, for the treatment of alcoholism, and the other for those inebriates whom friends might compel to attend and take the treatment. It should be so provided that inebriates might, upon proper complaint, be sent to the sanitarium by insane commissions in like manner as insane patients are sent to State asylums; and, also, that the several magistrates, especially in the cities, under circumstances to be prescribed, could sentence "common drunks" to the sanitarium; and all such patients be confined just so much as may be necessary to apply the best-known remedies for alcoholism.

"There can be no valid objection to taxing the saloons to build and maintain such institutions, so long as the saloons are recognized by law. If liquor dealers will poison men's bodies and fire men's brains with nerve-destroying beverages, let them be taxed to restore to their victims sound bodies and healthy brains.

"Let the question be agitated. Let friends of the slaves to appetite and the victims of disease created by alcohol stir themselves in the interest of humanity. Prepare for a campaign in each legislature next winter, and let us not rest until the means of cure shall be placed in reach of every sufferer from alcohol free."

CAFFEINE CONTRA-INDICATED IN ALCOHOLISM; Dr. Czarkowski (*Vratch*, 1893; No. 4).

The author considers alcoholism a counter-indication to the use of caffeine. In one case, a patient afflicted with mitral insufficiency and œdema, manifested mental agitation and exhilaration, after having ingested 2 grammes [½ dr.] of caffeine citrate in the course of 24 hours. When

the effect of the caffeine ceased, the patient became sad, and did not retain any recollection of his state of agitation.

In another case (of kidney disease), there was noticed, after the fifth dose of 20 centigrammes [3 grains] of the same salt, marked excitement and fright, followed by a loss of consciousness for several hours.

In a third patient (afflicted with typhus), a few doses of caffeine (of 60 centigrammes [9 grains]) produced a furious delirium, which the patient did not remember afterwards.

Dr. C. concludes that in an alcoholic patient, the use of caffeine requires much caution; that we should always commence with small doses; and that the attendants should be told to discontinue the medicament at the least sign of agitation.

PRIZE ESSAYS ON THE ACTION OF ALCOHOL AND ITS VALUE IN DISEASE.

The American Medical Temperance Association, through the kindness of J. H. Kellogg, M.D., of Battle Creek, Michigan, has decided to extend the offer of the following prizes for the year 1894: (1) One hundred dollars for the best essay "On the Physiological Action of Alcohol, based on Original Research and Experiment." (2) One hundred dollars for the best essay "On the Non-Alcoholic Treatment of Disease." These essays must be sent to the secretary of the committee, Dr. Crothers, Hartford, Connecticut, on or before April 1, 1894. They should be in type-writing, with the author's name in a sealed envelope, with motto to distinguish it. The report of the committee will be announced at the annual meeting at San Francisco, California, in June, 1894, and the successful essays read. These essays will be the property of the association, and will be published at the discretion of the committee. All essays are to be purely scientific, and without restrictions as to length, and not limited to physicians of this country. Address all inquiries to T. D. Crothers, M.D., Secretary of Committee, Hartford, Connecticut.

AMBULATORY AUTOMATISM IN A DIPSOMANIAC.

Dr. Sonques reports the case of a man, aged 33, affected with dipsomania since his 20th year. In May, 1890, when starting to his work after a ten-days debauch, the man suddenly commenced to walk aimlessly from Paris in the direction of Vincennes. He passed the night in a wood and only emerged from his semi-conscious condition on reaching home the next evening. After he had become fully conscious, he could to a great extent recall what he had done and where he had been. A few months later, after a spree lasting 15 days, he made another semi-automatic excursion. Under bromide treatment the propensity to drink disappeared. Sonques points out that his patient was not an ordinary alcoholic, but was evidently a hereditary degenerate in whom the dipsomania might be considered a developmental neurosis.— *Arch. de Neur.*

KEROSENE IN INEBRIETY.

The most recent remedy for alcoholism in Russia is petroleum, to which the notice of the St. Petersburg medical authorities was called by accident. It appears that a laboring man who had been drinking heavily for four days and nights, entered, in a complete state of intoxication, a grocer's shop Unnoticed by the shopkeeper, he staggered up to an open cask of petroleum and began drinking from it. It is related that the petroleum cured him of all the effect of overdrinking; the nausea, unsteadiness of gait, the headache disappeared as if by magic.— *New York Medical Times.*

FATTY degeneration of the heart, not associated with valvular lesions or atheromatous changes of the arteries in young and middle-aged persons, is a strong evidence of alcoholic degeneration and inebriety.

Editorial.

1894.

THE JOURNAL OF INEBRIETY has come to the eighteenth year of its growth and development. In all these years only four issues have been missed; with this exception, the JOURNAL has appeared regularly. The storm-clouds of sneers and contemptuous criticism has receded, and only low mutterings of belated egotists are heard far in the rear. The work of the JOURNAL to group and formulate the truths of the disease of inebriety has been slowly gathering force and power through the past, and to-day the fact of disease is an accepted truth in science. This JOURNAL has been and is an educational power, in this country and Europe, the influence of which is apparent in the reproduction of many of its papers and editorials, by foreign authors, some of which have been copied by American journals, credited to foreign sources. The publication last year of a volume of some of the leading papers which have appeared in the JOURNAL, and its unusual sale and demand from abroad, is additional evidence of the value and recognition of the work of the JOURNAL. The wide-spread wave of empiricism, looking for specifics, would never have been possible had it not been for the JOURNAL. This very movement is in itself an index and promise of a tremendous advance of public sentiment and recognition of physical conditions, and the growth of the idea of physical means and remedies. As a common incident in the history of all great truths which have their stage of opposition, empiricism, and final acceptance, the fact of disease in inebriety is an illustration.

While it is a keen pleasure to feel that the JOURNAL has been a great silent power, pointing out facts concerning inebriety which have revolutionized the theories of ages, there

is associated with this a consciousness of the vastness of the subject, and the present limitations and restrictions in its study, which makes all present attainments seem feeble. There are abundant signs of great movements and changes of public sentiment, both in England and this country. The JOURNAL now circulates in thirty-four States of the Union, and is read by a very large and ever-increasing number of scientific men; and the new year brings a wider prospect and more certain attainments for the work to come. THE JOURNAL OF INEBRIETY is in the field, and to all its friends and well-wishers is extended a hearty greeting. The days of controversy are over, and the time for study of facts has come. No matter what the conclusions of these facts may be, if they are only correct, the conclusions will take care of themselves. The JOURNAL brings a portrait and notice of a great pioneer in this field, who has gone on before, leaving larger duties and greater incentives to those who follow. It also brings with it possibilities that widen with each issue, and promise a future beyond any attainments of the past.

PUBLIC MEETINGS AND MORAL SUASION IN THE TREATMENT OF INEBRIETY.

The common delusions among inebriates are much the same, although varying in form and persistency. One that is always present is the hope of being a moderate drinker, and using spirits within certain limits,—never to excess. Every failure to accomplish this is attributed to certain external causes that can be prevented. Another delusion is that spirits have some food and medicinal value; also, if used properly, in any case, would be of advantage. A very common faith is that one has full power to control all use of spirits, and that he is not as bad or weak as others would infer. Every period of intoxication is supposed to be exaggerated by his friends for the purpose of frightening him. Each excess in the use of spirits is largely the fault of others.

The farther he is removed from them, the more trivial and unimportant they appear. Delusions of strength to overcome all forms of drink impulses, to resist temptations, and have complete self-control, break up all natural prudence and caution.

Every means that bring encouragement to these delusions are welcomed. The contagion of temperance revivals, signing the pledge, and public declarations never to drink again; also the idea of final cure in some state by which he can never use spirits to excess, are stimulants to the false conceptions present. Opposition to these delusions by ridicule, denial, and contradiction, and by constant reference to them, are fatal mistakes.

Public meetings in which spirits are condemned, and the fatality of inebriety is made prominent, react dangerously on many cases — simply because it is a contradiction to their delusions. Meetings in which perfect cure is promised by the use of certain means, such as the prayer, the pledge, the society, and the specific cure, are eagerly supported because they are along the line of delusions and misconceptions. They feed the secret idea of ability to avoid excesses in the future, and the capacity to act and will, which others say they do not possess. But all these means, in the end, are disastrous, and fatal to healthy growth. The inebriate is rarely driven back to sobriety by the force of negations, nor is he restored by means that encourage his delusions.

To intensify and dwell on the idea of the injury and damage sustained from use of spirits is to weaken the capacity to build up against it. Public declarations of drinking scenes and the results which follow, are other phases of the same mental disorder which demands spirits for relief. Reform efforts that make inebriates and inebriety conspicuously odious give unhealthy prominence to morbid impulses that are more difficult to overcome. The weakened brain of the inebriate suffers from a form of mental exaltation, that is strengthened by making his disorder prominent. Diseased impulses magnified can never be mortified out of existence.

The door of escape must be through means addressed to his environments and organic change of life and living. His past alcoholic dissolution must be ignored and put one side; his mind and energies must be turned into new lines of thought. New ideas, new purposes must be brought in to dominate and control the organism. This cannot be brought about in public gatherings, where contagious enthusiasm centers about the magnitude of his disorder, and the promise of immediate relief by the use of means clothed in mystery. The inebriate's unstable mental state makes him particularly susceptible to appeals to the emotions; hence he responds quickly to such influences, which as quickly die away. These means are always disastrous not only because they feed the delusions that are a part of each case, but they rouse up false hopes that disappoint and weaken the self-confidence in recovery.

Concentrating all attention on the condition of inebriety is not favorable to the mental rest and recovery which is sought for. If inebriety had no pathology or restoration, no physiology, moral and revival efforts might assist to a final cure. All public meetings and efforts to rouse the inebriate to recover, by appeals to his pride, or his fears, or his ambitions, or selfishness, ignore all conceptions of the pathology or organized march of degeneration that is manifest in the symptom of excessive use of spirits. Trusting exclusively to the pledge and prayers is the same error of overlooking the causes and condition of the patient and assuming some moral weakness as the only cause present. The failure of these means is prominent in all sections, and yet the same mistakes are repeated yearly. Revival efforts and temperance movements, and even some so-called institutions, still adhere to these delusions of appealing to the emotional character of the inebriate as the only true way to reach his malady. The "specific," with its dogmatic promises, are equally dangerous. Evidently this entire field of means and measures must be greatly changed, and placed on a different and scientific basis.

OPIUM COMMISSION.

This commission, appointed by the English government, to take testimony concerning the use and abuse of opium in India, has lately terminated its labors, and will soon present a report to Parliament. Much of the testimony has appeared in the medical journals, and has a strangely familiar sound to American readers. Particularly the statements of the food value of opium, and its prophylactic power in diseases. Also its harmless effects on the physical and mental organism, sustained by the stock cases of those who have taken opium in large doses for years, and evidently lived longer, better lives for this reason. Many of these witnesses are surgeons in the army, and of course should be familiar with the facts. The very same evidence has been offered yearly in defense of alcohol, and the same identical cases are constantly put forward to fasten the statements.

This commission held four sessions in London, then went to India where the evidence could be more easily obtained. On the other side testimony was offered to show the injury from the continuous use of opium. Large sections of country in India were said to be impoverished and made poor by the free use of opium. One fact was dwelt upon, that where opium was freely used crimes of violence were rare, but suicide and dementia are more common. The central question was, What effect on the native races of India followed from the free use of opium? The most conflicting testimony was offered on this subject, and the authorities on both sides were equally able. The result of these investigations will be awaited with great interest. This committee is a practical illustration of what should be done by Congress in the alcoholic traffic of the country. An authoritative committee, gathering evidence from all sides of the subject, would bring out facts of the greatest value in the study of this problem.

SOME QUESTIONS AWAITING SOLUTION.

To our assumptuous critics who claim full and positive knowledge of the etiology and pathology of inebriety, and exact comprehension of the action of alcohol on the organism, we submit the following questions, which the patient student in this field would like to have settled; or at least have some additional facts that will enable him to understand the subject more fully.

Why should a certain large number of cases of inebriety present strong evidence of originating in the higher psychical brain centers, and then extending down to the lower organic functions?

The first approach of disease appears in the realm of morals and duty. Dim shadows creeping over the consciousness of right and wrong, followed by dullness of honor, character, and appreciation of his relation to others. A subtle twilight or degeneration slowly merging into alcoholic excess, which may begin in a long period of moderate drinking, or become excessive at once. A form of paresis, affecting the entire organism, breaking out into inebriety at last, following a uniform march of desolation. The inebriety may be periodical, in which case it is often associated with delusions and deliriums, and, where the drinking is constant, states of dementia with hallucinations follow.

Many of these cases are criminals, and assume a degree of health, and demand recognition as fully sane and competent, only to disappoint and startle by their failures. Mental degeneration begins long before spirits are taken, and why it should break out in inebriety, and not continue and become paresis, or why should these cases become epileptics after a short alcoholic excess, are open questions.

Why should the alcoholic impulse in these cases suddenly change and be followed by acute mania, dementia, or melancholy? Why should criminality, pauperism, and other profound degenerations appear from the first, and only after long intervals become inebriates? What evidence can be gathered to show that this early stage of psychical degen-

eration will not develop inebriety, or is not a part of the disease processes?

Why should a physical causation be denied in the cases where inebriety begins abruptly, and goes down rapidly to chronic stages?

Cases that have distinct drink storms, followed by perfect calms and free intervals of temperate living. Cases that after the first use of spirits seem never able to stop, but follow a line of continuous dissolution. Other narcotics may divert the progress in a new direction, and opium, cocaine, chloral, and other drug manias may follow. How shall we explain the inebriety which appears in persons who are suffering from cell and tissue starvation; in persons who give a history of nutrient defect from childhood; in persons who have never fully recovered from profound organic disease, or injury, or shock; in persons who, after years of hygienic neglect of both body and mind resort to spirits; or, in persons who drink from the contagion of example at first, or the dominance of a theory of the food value, or medicinal power of spirits? How can we understand the profound impression alcohol has over the psychical brain centers? is it from the presence of bacteria or ptomaniæ poison, which demands a repetition of the same or an allied toxic product?

How can we realize the cumulative effects of alcoholic degeneration which gathers through long years of moderate drinking and then suddenly explodes in some acute inflammation and death?

In the realm of heredity the most startling facts appear. What can be said of the outbreak of inebriety in father and son, at the same time of life and under the same circumstances; or what law prevails that holds the drink craze in check for one generation and permits it to appear again at the same period in the third generation? Why should this alcoholic heredity be marked by other degenerative conditions, and manifest itself in various psychoses?

Why should the toxic states of the parents appear in their children conceived at this time? and, beyond these more prominent facts appear the vast ranges of retarded development of cell and tissue growth, that is apparent in many cases. There are clearly race influences, and climate influences, and sociological, hygenic, psychical factors that are often very prominent in the causation. When these and many other conditions are fully understood we can assume a more positive degree of knowledge of inebriety and its pathology and treatment.

EVOLUTION IN REALITY.

When the late Dr. Parrish urged in a lecture that inebriety was always a disease, in 1870, a wild protest went up from all sides. The religious press were very violent in their denunciations, and medical men of prominence said this theory was absurd and insane. In 1876 the JOURNAL OF INEBRIETY appeared, advocating the same view. A wild wave of criticism and denial followed, and many good physicians, among them the late Dr. Gray of Utica, denounced the idea of disease as a doctrine both dangerous and insane.

During the first ten years of the publication of this journal, almost every issue brought out savage criticism and sneers from not only medical men and journals, but lawyers, clergymen, reformers, and others. Finally, this storm of sneers and criticism began to subside, and physical conditions causing inebriety were recognized, and theories of half vice and half disease were urged.

Now appears a curious fact common to the evolution of all truth, but not often recognized. Men who were most bitter against Dr. Parrish and others, also this journal and its editor, have become the defenders of the theory of disease in inebriety. Two of these persons have, during the past year, asserted that they have always urged this view, and were among the first to recognize its correctness. A third eminent

man in a lecture defended this view as one he had long entertained in opposition to the profession generally. If these men live, in a little time they will no doubt claim to have been the first to discover the fact of the disease of inebriety. These very men, with others, were among the most bitter critics who not only denounced our association, its journal, and members as dangerous cranks, but as unworthy all scientific recognition, etc. During the past year a new class of critics has appeared, who use the same old terms of cranks, fools, and unscientific; then announce that a certain small minority of all cases of inebriety are no doubt diseased. Like the critics of ten years ago, they make classes of inebriates, and describe what should be done, and the nature and treatment, with great confidence. It is the same old story of history. The skeptics and opponents of every new truth, when this truth becomes an established fact, are the first to claim the honors for its discovery and defense. The first train celebrating the opening of a new railroad is always loaded with its former bitter opponents, who are now foremost to claim the honors of the enterprise. The reality of evolution, noted in this journal and its work, brings the fact into greater prominence, that truth cannot be sneered down or crushed by opposition. It will always live and grow, from opposition as well as acceptance.

"THE MAD, MAD WORLD."

In both England and America many temperance and religious leaders have condemned all efforts to study inebriety from the physical side, and refused to recognize the possibility of disease. A few years ago, several leading religious papers denounced this disease question and its advocates in the severest manner. The temperance reformers were equally personal and vindictive. This has finally turned to a certain lofty scorn and contempt for all scientific study in this field, as the work of irresponsible persons, who are either dishonest or weak-minded. In England, appeals

made to these persons for their influence in securing parliamentary inquiry, and practical knowledge on this subject, have been treated with indifference and opposition. In this country, this same class have held themselves apart, and refused to notice any efforts to show the physical side of inebriety, as beneath their notice. The president of a national society of philanthropy objected to the reading of any papers that favored the disease of inebriety, before that society. A college president grew very indignant over the presentation of the disease theory at a public meeting, and his remarks were reëchoed by many temperance orators, the religious press, and from many pulpits. This strange opposition is familiar in many sections and often appears in most unexpected sources, but the fact that many of these lofty critics have become warm defenders of the gold schemes which promise a cure in a few weeks by remedies involved in secrecy, is still more extraordinary.

Reformers, philanthropists, clergymen, and the religious press, who have been so bitterly opposed to the recognition of the disease of inebriety along lines of scientific inquiry, are now welcoming and freely endorsing the most fraudulent schemes for its cure. The same thing is noted in England; a noted leader in the temperance world, who opposed the English society for the study of inebriety, is now an officer in a gold cure asylum. In this country, the advertisements of the "gold cures" in the religious press, the public endorsement of the different schemes by the various temperance revivalists, who are also urging the power of the pledge and prayer are common. Men and periodicals who have been relentless critics of the JOURNAL OF INEBRIETY and its principles, who have seen nothing but *crankism* and stupid error in the question of disease in inebriety and its curability by physical means, are now the advocates and defenders of secret remedies for the cure of such cases.

"Verily, this is a mad, mad world, my masters."

CRITICISMS.

To call the disease of inebriety a half truth and a half lie seems to be very satisfactory to one of our critics. Another critic is shocked at the terms ginger, cocaine, ether, chloral, and other inebriates. They are absurdities to him, and indicate crankism of the worst type. Another critic deplores the inexact use of the term inebriety. He expects it to be defined and used with as much clearness as typhoid or other medical terms. It would be interesting to hear his definition and use of the term of insanity. Another expert has no confidence in our work because we do not publish results of autopsies and pathological facts sustaining the question of disease. To another medical man the absence of authoritative studies of the nature and effects of alcohol indicate our work to be of no value. The prominence we have given to heredity as an active factor in the causation of inebriety is a fatal blunder to the scientific value of the journal in the opinion of a medical teacher. Another teacher is offended with the medico-legal facts given which seem to indicate irresponsibility. A man who occupies a prominent position at the head of a medical college thinks we are trying to work up a medical side of a subject that has been studied for a thousand years and settled by all the great men of the world; that our work is a "fad" that will die soon. To these and other critics who are evidently disturbed by our efforts we extend profound thanks and point them to the fact that the known compared with the unknown, is as the universe to nothing. The student of inebriety has not to-day reached the frontiers of this new land of medical and psychological study. He is only in sight of the misty outlines of hills and valleys that can only be known from long years of ardent study by trained expert explorers. Our work is to prepare the way, create scientific interest, and mark out lines of research for the future.

Clinical Notes and Comments.

THE DANGERS OF COCAINE.

The rapid accumulation of cases in which alarming symptoms followed the local application of small quantities of cocaine, together with the fact that these untoward effects are due to individual idiosyncrasy and do not invariably occur immediately, is a positive warning to the profession that this powerful substance should not be used in any case for the first time without proper antidotes directly at hand and the patient kept under surveillance for at least a half hour. We will not attempt to refer to the cases published in which ordinary therapeutic doses administered internally or subcutaneously, caused symptoms similarly embarrassing.

Nearly three years ago, Satterwhite, as a result of a study of one hundred cases of poisoning by this alkaloid, called attention to the dangers attending the use of even very small doses, and at about the same time another author, after summarizing the records of fifty cases, made a similar announcement. That this warning was well founded is evident by succeeding publications. A case is reported by Broughton in which unconsciousness, an irregular, slow respiration, and a slow pulse, followed the application of three minims of a twenty per cent. solution within the cavity of a tooth. Whistler, after the application of a four per cent. solution to the nasal cavity, noted vertigo and threatening syncope. In a case of glossitis, Ricket states, that the patient became moribund after the use of a similar solution. Myrtyle dropped three minims of a three per cent. solution in each eye, which immediately caused a sense of numbness in the back of the tongue and throat, palpitation, threatened syncope and nausea. Bettleheim records that in one case the hypodermatic injection of one-sixth of a grain induced

alarming symptoms; and in another, one-eighth of a grain similarly injected caused unconsciousness, congestion of the face, irregular breathing and trismus.

Cotter found unpleasant symptoms in more than one instance while using in the nasal cavities a solution as weak as ten per cent. Thus, in a young lady there was sprayed into these fossæ six or seven minims of a ten per cent. solution, and just as he was going to operate, the breathing became very difficult, the larynx seemed paralyzed, distressing symptoms of cardiac and general depression appeared, and she was unable to walk for two hours. Hübner dropped about one and a half minims of a two per cent. solution into the nostril of a healthy young soldier previous to the removal of a polypus. This was soon followed by unconsciousness, an exceedingly weak pulse and cold skin. A case is reported by Ficano, of a woman forty-three years of age, who had for some time suffered from intolerable tinnitis, which accompanied a dry otitis media, with a diminution of hearing. A few drops of a five per cent. solution were introduced into the middle ear by means of a catheter, after the use of the Politzer method of insufflation. In a short time vomiting came on with cramps and diarrhœa, which lasted for several hours, there was marked muscular inco-ordination, and symptoms generally analogous to those of sea-sickness.

There seems to be no doubt that cocaine is absorbed with extraordinary rapidity and that the stronger the solution which is locally applied, the greater the danger of toxic symptoms, but whether the latter are to be attributed merely to the larger dose or to some obscure action, is not apparent. Falk has found that the rapidity of absorption varies in the different tissues — absorption taking place most rapidly through the conjunctiva, then in the following order: nose, larynx, mouth, and ear. It is generally conceded that a ten per cent. solution is sufficiently strong for most purposes, and robbed of many of the dangers of those of greater strength.

The nature of the toxæmic symptoms varies so greatly that no rule-o'-thumb treatment can be set down: in some

cases nervous and muscular excitement predominates; in others, respiration in the function most seriously affected; in others, the circulation, etc. Among the agents found useful are nitrite of amyl, strychnine, atropine, morphine, alcohol, ammonia, digitalis, chloral, seriaprisms over the heart and stomach, hot drinks, and artificial respiration. —*Medical and Surgical Reporter.*

PLACES FOR USING MORPHIA.

This account appearing in a San Francisco paper is by no means new or peculiar. Places of a similar character are known to exist in New York, Philadelphia, and Chicago. Some of the so-called gold cures, or opium specific homes, are only parlors for the use of the drug, under the mask of gradual reduction. The victim visits them only to become more incurable, and when it is difficult to pay the charges, or to avoid exposure, they use the needle themselves. Several physicians who advertise to treat the opium disease, are doing this work exclusively. There are many reasons for believing that this is gradually increasing.

There is a place in San Francisco where victims of the insidious morphine habit go for "treatment" daily, the number of visits depending on the extent to which the deadly drug has gained control of the unfortunate users. The "patients" of this peculiar institution are of both sexes, for women as well as men have learned the secret of the "gun," as the regular morphine fiend calls the hypodermic syringe which gives him surcease of care and sorrow.

The place is in a big building on Larkin street, almost in the shadow of the new City Hall. One of the rooms is occupied by the elderly man who ministers to the cravings of many patients. Here he awaits their daily visits, and, when they come, supplies their wants with a dexterity that has come from a practice both large and long. It does not take many minutes to give the morphine users what they seek.

A few grains of morphine and a spoonful of hot water appears at times greater than stacks of coin to a confirmed fiend, and there is nothing he would not sacrifice in order to obtain it.

The proprietor of the Larkin street place is a man with a history. At one time he figured prominently in an interior town in the southern part of the State as a prominent physician. Patients flocked to his office to consult him. His healing powers seemed marvelous, and his success was great, but from administering drugs he came to use them, particularly opium. Once a victim of the morphine habit, his constitution became so undermined that finally he found himself unable to attend to his professional duties. Then began the decline. His practice rapidly dwindled away until not a patient was left. What money he possessed followed in a short while, and finally he found himself thrown upon the world minus friends and wealth.

Numerous attempts at regaining the lost ground were made, but all proved failures, and, finally abandoning all hope of ever getting on in the world again, the doctor drifted into this city, thinking that here he might find less difficulty in ekeing out an existence than is to be met with in an interior town.

It was his own experience in supplying himself with the drug which had taken such a strong hold upon him that suggested the business upon which he is now engaged and which is paying him well.

He early realized how many of San Francisco's citizens had fallen victims to the use of narcotics, and figured that apartments where morphine could be privately given would prove profitable.

From the moment he opened his place it has not lacked for patrons, and they are not people from the lower walks of life, but refined and intelligent persons, who know that they have fallen victims to a fearful habit, and do not care to be free.

Loiter in the vicinity of the morphine parlors awhile and you will be astonished at the character of the patients who

make daily visits to the place. There are many women among them — women who are young, well-dressed, and refined in appearance. Men saunter in for a "shot" as other men drop in at a saloon on the way to business for a morning bracer.

In arranging his apartments the man of morphine showed great consideration for the comfort and artistic taste of those who might become his patients. A more finely arranged suite of rooms could not be found in a day's travel. Heavy tapestries hang over the doors and windows, while spread upon the floor are thick, soft rugs. The furniture is in keeping with the other surroundings.

One of the rooms is used for lounging, and scattered about the tables are books by standard authors, magazines, and daily papers. The other room is the office proper, and there the doctor holds forth.

His stock of trade consists of several hypodermic syringes, a small oil stove, several small vials containing cocaine and morphine, and some utensils in which water is heated.

There are no regular office hours during which patrons must call, but there is a rule for the government of the sexes. On the wall of the office is a sign to the effect that ladies will be treated only at 9, 1, and 5 o'clock. Another sign contains the price list.

One dose of morphine or cocaine is administered for 75 cents, while to regular patrons a special rate is given.

Morphine is administered in two ways, either by injection or through the mouth. The former is the one generally in use. A few grains of morphine are placed in a spoon with some water. Then the spoon is held over a fire until a warm solution is made, and it is injected into the body with the assistance of a small syringe.

Cocaine is taken in a similar manner.

The constant pricking of the flesh with the point of the syringe needle causes the body to become terribly disfigured. This disfigurement consists of a lot of small punctures, which resemble somewhat tattoo marks.

With those who know him the "doctor" frequently grows quite confidential, and tells much of his doings and experiences. Queer tales some of these make, and all are tinged with sorrow.

"Do I like my occupation?" he recently remarked in reply to a query. "Do people enjoy committing murder? I hardly think so, and yet what else is there for me to do?

"Cursed as I am, no one would care to or could help me, and yet I must live. As to the poor devils who go to make my list of patrons — well, I am doing them a greater kindness than injury. What if one does die? Is he not better off? If I were not a coward I'd have been dead long ago.

"Do I receive persons here who have never used the drug? No; I'd sooner kill a man than see him begin to use morphine."

The regular patrons of the place number about twenty-six, and each makes two or three visits a day. There is not much secresy about the establishment. Scores of people know of its existence, but the police have never interfered with it.

ANCIENT PUNISHMENTS OF DRUNKENNESS.

The offense of drunkenness was a source of great perplexity to the ancients, who tried every possible way of dealing with it. If none succeeded, probably it was because they did not begin early enough, by intercepting some of the ways and means by which the insidious vice is incited and propagated. Severe treatment was often tried to little effect. The Locrians, under Zaleucus, made it a capital offense to drink wine, if it was not mixed with water; even an invalid was not exempt from punishment, unless by order of a physician. Pittacus of Mytilene made a law that he who, when drunk, committed any offense should suffer double the punishment which he would do if sober; and Plato, Aristotle, and Plutarch applauded this as the height of wisdom.

The Roman censors could expel a senator for being drunk and take away his horse. Mahomet ordered drunkards to be bastinadoed with eighty blows. Other nations thought of limiting the quantity to be drunk at one time, or at one sitting. The Egyptians put some limit, though what it was is not stated. The Spartans, also, had some limit. Arabians fixed the quantity at twelve glasses a man; but the size of the glass was, unfortunately, not clearly defined by the historians. The Anglo-Saxons went no further than to order silver nails to be fixed on the side of drinking cups, so that each might know his proper measure. And it is said that this was done by King Edgar after noticing the drunken habits of the Danes. Lycurgus of Thrace, went to the root of the matter by ordering the vines to be cut down. And his conduct was imitated in 704 by Turbulus of Bulgaria. The Suevi prohibited wine to be imported. The Spartans tried to turn the vice into contempt by systematically making their slaves drunk once a year, to show their children how foolish and contemptible men looked in that state. Drunkenness was deemed much more vicious in some classes of persons than in others. The ancient Indians held it lawful to kill a king when he was drunk. The Athenians made it a capital offense for a magistrate to be drunk, and Charlemagne imitated this by a law that judges on the bench and pleaders should do their business fasting. The Carthaginians prohibited magistrates, governors, soldiers, and servants from drinking. The Scots, in the second century, made it a capital offense for magistrates to be drunk; and Constantine II of Scotland, 861, extended a punishment to young people. Again, some laws have absolutely prohibited wine from being drunk by women; the Massilians so decreed. The Romans had the same, and extended the prohibition to young men under thirty or forty-five, and the husband and wife's relation could scourge the wife for offending, and the husband himself might scourge her to death.

MORPHINISM IN THE NOBILITY.

Prince Leichtenstein of Vienna who recently committed suicide was a morphimaniac. For years his name was mixed up in all kinds of scandals and on several occasions, notably in connection with the defrauding of a porter of the Hotel Frankfort at Vienna of his entire savings, he would have had to answer for his shortcomings in the criminal courts had not he belonged to a family of sovereign rank.

So great was the scandal created by this transaction that he was recommended to leave Europe for a while, and accordingly he set out upon a tour round the world. The ship on which he was traveling came into collision with another vessel while entering the port of Bombay, and this had such an effect on the nerves of the Prince that he was convinced of its being an indication by Providence that he should go no further, and he straightway returned to Europe, establishing himself at Paris, where his condition became such that he had to be placed in the private lunatic asylum of Dr. Blanche.

It was about this time that his family resolved to place him under curatel, depriving him of the control of the remnants of his property and reducing him to the condition of a minor or a madman, and during the legal proceedings in connection therewith a statement was made of his affairs, from which it appeared that the Austrian and French usurers with whom he has dealt had foisted upon him the most extraordinary articles as part and parcel of their loans, their object in so doing being to evade the penalties of usury by explaining that the transactions with the Prince were not of money lending, but of purchase and sale of goods.

Among other things it was found that the Prince owned some fifty tons of spoilt cheese, a number of cases of useless muskets, and no less than 118 obsolete and totally useless locomotives, which were subsequently sold as old iron. He seemed not only to have been dishonest, but to have been the tool of others more disreputable. His highest pleasure was obtained in doubtful transactions.

OPIUM FIELDS IN CHINA.

The following facts are of interest in view of the investigations into the use of opium by the English commission: The difficulties in the way of opium growing are enumerated thus: (1) The fields require twice the manure needed for dry grains or cotton; (2) wet and stormy weather when the heads are forming causes the capsules to droop and the roots to rot; (3) the juice must be collected the moment it is ready, yet it cannot be gathered in blazing sunshine or during storms; dull days, or days when a light rain is falling, are good, and best of all are moonlight nights; (4) laborers engaged to collect the juice require to be paid even if the weather prevents their employment. The method of collecting the juice in Wenchow is for one man to slice with a downward stroke the skin of each capsule, while several other men go around with bamboo scoops to scrape off the juice that thereupon exudes. No capsule is sliced twice on the same day, and the largest capsule will only bear six slicings. Morever, the juice of the first two slicings is far better than that of the later ones; in fact, the wealthier farmers put aside the juice so collected, and, after drying it several days in the sun, store it away in the shells of goose eggs in some dark place for three years. It is said to be then superior to any Indian drug. Native opium, in any case, should never be used in its first year; at the very least a summer should be allowed to pass. The best land for poppy-growing is the slightly brackish, but even that is only good for two years. A mow (say 800 square yards) will yield upwards of 4 lbs. avoirdupois of juice if well manured and if the plants are carefully thinned out. A medium crop is 2 lbs. to 3 lbs., where the capsules have only taken four slicings. But it will sometimes happen that in spite of all care and on the best land the capsules yield no opium. — *Medical Review.*

The Massachusetts Hospital for inebriates and dipsomaniacs received one hundred and sixty-one cases last year. One hundred and twenty-four were committed by the courts. Each commitment was for two years.

THE TREATMENT OF INEBRIETY IN ENGLAND.

The report of the Dalrymple Home at Rickmansworth records an increased number of admissions during the past twelve months, there having been forty-four admissions during that period. In the nine years of this institution's operations 320 patients have been received, and a record is presented of the 305 who have been discharged. Of these latter, twenty-seven more entered as private cases than did so under the provisions of the inebriate acts. It is gratifying to learn that no fewer than seventy-seven were in residence for the maximum legal period of one year, while 101 remained from four to nine months. The average age of admission was 36.07 years, bearing out all past experience that the greatest liability is between thirty and forty. As might have been expected, more than four-fifths of the patients were from England, Scotland followed by Ireland coming next with a few cases from Wales, France, Switzerland, the United States, Canada, South America, Cape Colony, Australia, New Zealand, India, and the Straits Settlements. The proportion of the educated has kept up, only thirteen having had but an elementary education, and seventy having passed through college. Idleness seems to have been a substantial factor, sixty-six having been gentlemen of no occupation. The learned professions were all represented, as were literature and art. Heredity, either inebriate or insane, was traced in more than one-half the cases. Among the various narcotics indulged in were chloral, morphine, cocaine, chlorodyne, and sulphonal. The average period of addiction has been eight and a-half years. Thirty of the patients were beer or wine inebriates. Nerve shock accounted for fully one-sixth of the cases, ill-health for twenty-four, injury for twelve, overwork for eighteen, syphilis, gout, rheumatism, and chest disease contributed largely to the inebriety, while twenty-one were indebted for their malady to the influence of occupation. — *British Medical Journal.*

GYMNASIUM AND TURKISH BATH.

A gentleman in Brooklyn, N. Y., has conceived the idea that the gymnasium is the best remedy for inebriety, and in a letter to the daily press takes strong issue with Dr. Shepard, the well-known founder of Turkish baths in this country, who urged this form of bath as a central remedy. The following reply from Dr. Shepard is a clear statement of the principal facts:

In the first place there should be no exclusiveness of remedies for this disease, and doubtless many cases would need different treatment from others. If any of such poor sufferers can be cured by exercise, why, God bless them, I would say. I once read of a case of a man who was bitten by a poisonous snake, and in his fright ran a long distance to get help, whereupon he broke into a most profuse perspiration and was cured thereby. But most certainly there is a large class of cases who are absolutely unable to take vigorous exercise without too large an expenditure of the very vitality needed to carry on the functions of life, and is it not apparent that inebriety claims among its victims many of the hardest working individuals of the community, who do not seem to get well any faster when they are crowded with work? On the contrary, judicious exercise combined with Turkish baths and mental discipline would be likely to do much for their cure. Many a time does alcohol stimulate the poor inebriate to the wildest excitement in the way of exercise. Does anyone for a moment think that he is less liable to take another dram on account of his previous exercise? And yet this is remedial. It is nature's effort to throw off the poison, even though at times the patient is exhausted. The medical man tells us that inebriety is a disease and needs treatment as much as a case of smallpox or scarlet fever. That is a practical idea and needs only to be carried out to demonstrate its truth. And what have the theorists or moralists given us as yet. Why, the very best they have to offer after a century of tribulation is the stone of prohibition. Shall we attempt

the impossible by trying to teach our children virtue by building around them a stone wall wherein no vice can enter. How much wiser is it to endow them with true manliness by teaching them self-respect and self-control. In trying to secure prohibition are we not attempting to treat the whole community as though they were children? Can we ever hope to make the people of any community pious or virtuous by legislation? The bane of excessive alimentation is too apparent — from the cradle to the grave. In our country of abundance the infant is overfed, the child is stuffed, and all the way along life there is the constant endeavor to see how much aliment can be disposed of, not what is best and most conducive to a higher growth, and the great mass of diseases that doctors are called upon to treat arise from excess of food. The great advantage of exercise is simply to work off this excess. Tonics and stimulants are administered to help on the work, with the result of a worn-out system at half its allotted time. The primary effects of tonics and stimulants are to brace up the nervous system, and then the sufferer feels better and imagines that all is well, little recognizing that the resulting depression and all the other untoward symptoms are simply the secondary effect, and that is when a renewal of the dose is sought with the same routine of excitement and failure as before, only that the dose needs to be increased to bring about the same effect. Inactive lives are simply the result of torpor brought about by overfeeding. Health and activity are naturally the co-existing results of a well-ordered life. If alcohol has no more power in its relation to a living nervous organism than the same quantity of water has, then is our argument of no avail, and true it is that all action of whatever kind is by or through the nervous system — which is spread out like a delicate network through every part of the body — so that if alcohol is presented to any part the nerves of that part give the alarm and the organism does the rest — for instance, when alcohol is presented to the stomach in excess, that organ, if in good condition, will throw it out instanter; but if alcohol is

allowed to pass on it still maintains its individual characteristics, remains as alcohol and is thrown off as alcohol, and does not enter into combination with other substances to build up the system, as water does; indeed, our living nervous organization is largely made up of water, and thus, instead of becoming a component part of the body, alcohol is always and every time a foreigner and interloper with dynamite proclivities, whose room is better than its company. Professor Wood says: "No one has been able to detect in the blood any of the ordinary products of its oxidation." "In the Arctic regions," says Edward Smith, "it was proved that the entire exclusion of spirits was necessary in order to retain heat." The more recent testimony of Greely is to the same effect, and Stanley gives us much the same evidence in regard to life in Africa. True enough, "what the inebriate needs first is a restoration of the nerve vitality which he has thrown away on alcohol;" but very evidently this comes within the domain of the physician and not the moralist, and here is just where the action of the Turkish bath is most powerful. By bringing about a condition of blood purity we inevitably correct and strengthen "deranged and weakened nerves and nerve tendencies." Any one who imagines that as good a result can be secured by a sweat with exercise and then a shower bath, only shows unacquaintance with the resources of the Turkish bath. An unprejudiced observer who will practically test this must quickly acknowledge there is no agency in the world so powerful to purify the blood as the Turkish bath. Its resources are almost illimitable, and as for building up of tissue that is only secured by rest. During sleep the work of assimilation is most perfectly carried on, and that is one reason why invalids convalescing can sleep so much, and why it is so necessary for them—better than any medicine. We are no way inclined to find fault with the gymnasium. In competent hands it is a splendid helper, and conduces to the betterment of the community, and we are glad to know that "there is in the city of Brooklyn an institution superior to the Turkish bath model,"

and may their number ever increase, but still we will work and hope for what we consider infinitely superior. The Turkish bath system is good for the lazy, sluggish Turk. By the way, did they not make themselves one of the most powerful nations of the earth? It is also good for the wideawake Saxon, as has been demonstrated a thousand times. The records of every Turkish bath in the country will show this in multitudes of cases, and the wonderful growth in popularity of the bath comes from this fact alone. If bodily purity is not a guarantee of moral purity, certainly bodily impurity is a guarantee of moral depravity. What we advocated in our previous article and what we shall be glad to work for and what we hope to see is a model institution, built and conducted after the plan of Binghamton in its early days, where the Turkish bath shall hold a leading place, and where as a *sine qua non* there shall be enough control over the patients to retain them until thoroughly cured and established in their new condition. Many who were cured at Binghamton are now working in the useful ranks of society. While narcotics should be disallowed, by all means there should be a well-equipped gymnasium in such an institution.

ALCOHOL AND INEBRIETY.

Dr. Baker, the well-known superintendent of the Nervine Hospital at Baldwinsville, Mass., recently delivered an address, of which the following are some extracts:

"As a medicine, alcohol should be classed among the poisons, and should never be carelessly prescribed by the physician. There would be fewer cases of alcoholism if physicians would exercise the same care in the use of alcohol, including brandy, wine, and other spirituous liquors, that they do in the use of other powerful drugs and medicines.

. . . . . .

"In many instances of inebriety there is at first no strong desire for alcohol, the indulgence being voluntary and under the control of the will. The custom of social drinking adds

immensely to the liability of the establishment of the alcohol habit, while ignorance, poverty, and vice, monotony of life, unhappy domestic relations, and sorrow have been for ages important factors in the causation of chronic alcoholism. We are beginning to understand that habitual or periodical intoxication is not infrequently the result of antecedent conditions.

"The more complex conditions of our civilization bring a greater strain to bear upon the nervous susceptibility, our brains are finer in structure, more subtle in mechanism, than were those of our ancestors. It is not strange that in the restless life which we live, crowding into a day what were formerly the events of a week, should produce modification in the nervous system, and render more welcome the effect of artificial stimulation or sedation, to enable us to hold our own in the fierce struggle for wealth, position, or even the necessities of daily life.

"These conditions of daily life produce a nerve exhaustion in which is a great physical as well as mental weakness. In this very common condition of neurasthenia, alcohol is often used unwisely to goad on the flagging powers of life, with the final result, not only of increasing the sufferings of the individual, but of establishing the alcohol habit.

"No individual with a nervous, sensitive organization can with safety indulge in the frequent use of intoxicating drugs.

"There are also many persons, and their number is on the increase, who possess only sufficient nerve power to enable them to perform the most ordinary duties of life with safety. They are constantly on the border-line of nervous and mental disaster; let them attempt to carry a heavier burden by the aid of stimulants or narcotics, and the chances are very great that they will become the victims of insanity or inebriety.

"The successful treatment of the inebriate demands a much broader view than this. There must be no conflict between the scientist and the moralist in dealing with the alcohol question. The true physician never ignores the

moral influences, and, while there is room for the well-directed efforts of the church and all philanthropic societies in the warfare against intemperance, there should also be a clearer understanding of the subject from a scientific standpoint.

"You may banish alcohol from the land, if you choose, but you will still have to deal with the thousands of defective nervous systems, which are craving sedatives or stimulants.

. . . . . .

"In considering the best methods of dealing with the victims of alcohol, the element of disease must be recognized, the victim passed from the domain of morality, where he has been held so long, to the consideration of the medical profession. He must not be regarded as a moral delinquent, deserving punishment, but as a sick man needing restraint and special care.

"This can be best obtained in an institution especially prepared and equipped for the purpose. He will thus be placed under the best conditions for speedy recovery, or, if incurable, will be provided with a permanent asylum, and thus prevented from transmitting the insane or inebriate diathesis to a succeeding generation.

"This plan does not mean punishment, but it does mean protection to society, and it is the imperative duty of each commonwealth to establish and maintain public institutions for the cure of inebriety.

"Our present modes of dealing with inebriates are irrational and unscientific, and are based upon a total misconception of the subject. It is doubtful if a confirmed drunkard was ever reformed by punishment. The penal treatment of inebriety pays no attention to the physical condition of the inebriate, except to remove him from alcohol.

"Regarding him as a felon, it places him in association with the lowest and worst criminals; ignoring the element of disease, it neglects the means of restoration.

"Instead of sending the chronic inebriate to the county jail, our laws should commit him to an asylum for at least

one year. Upon the occurrence of a second commitment he should remain two years. If again returned, he should be restrained for an indefinite time."

THE following has a very familiar sound, and resembles the criticisms and objections to the work and objects of our journal: A coroner's jury returned a verdict to the effect that a certain prominent man had died of alcoholism. "Your verdict is absurd," some one said to the coroner. "Why so?" "Because he was never known to drink." "That's a fact." "He never went into a saloon." "You are right." "Then why do you say he died from the effects of alcoholism when we all know he was shot?" "That's all very true," the coroner replied, "but the man who shot him was drunk. Don't talk to me, if you please. I know my business. Deceased was killed by whisky."

The Vegetarian, a journal of very strong convictions, is very confident that fruit will destroy the desire for alcoholic drinks. Oranges and apples have been found to be the most effectual cure for inebriates, and the more they eat of these luscious fruits the more the desire for drink will diminish, until at last it is completely crucified, and so far as that individual is concerned, obliterated.

The predisposition to use spirits is often latent, and may remain so for a life-time in vast numbers of persons. They are from accident never exposed to the exciting causes which would have started into activity at once from these causes. The medicinal use of spirits as a stimulant in debility is a common cause; the use of spirits from exhaustion, anæmia, or in some emergency, are all followed by the same results. In many instances these early causes are overlooked, and when inebriety appears later, it is ascribed to other conditions.

DR. H. N. Moyer calls attention to the power of alcohol to weaken conscious control over the higher faculties, allowing the lower to act unchecked. In mental disease there is more or less loss of self-control, and alcohol has marked effect in such by still further weakening control, and leaving morbid tendencies more free to act. People who are only partially insane are often made violent and dangerous by slight alcoholic indulgence.

THE legislature of the State of Washington has passed a cigarette law, making it a criminal offense to manufacture, buy, sell, or give away, or have in one's possession, cigarettes or cigarette paper.

THE Physicians Manufacturing Company of Chicago, Ill., is a new venture with the object of placing drugs at a small cost, directly in the hands of the physician. It has grown out of the failure of druggists to work for the interests of the medical man, by substitutions and repetitions of prescriptions, and proposes to protect the interests of the physicians.

INEBRIETY is practically a warfare against society and the existing order of things. The inebriate insists on committing suicide, and pauperizing his family and associates while doing it. He pursues a career destructive to all law and order and sanitary life and living, and is a social outcast that has forfeited all rights of freedom.

THE twenty-fifth and twenty-sixth annual reports of the well-known largest and oldest Inebriates' Home in the world, at Fort Hamilton, New York, under the care of Dr. J. A. Blanchard, are before us. This asylum has been crowded to overflowing, and enlarging its buildings year

after year. The success of the work has kept pace with the increasing number of cases. Both the superintendent, Dr. Blanchard, and the consulting physician, Dr. L. D. Mason, are well known as leaders in this field. The reports of the former and the studies of the latter have become classical in the literature of this subject. We hope to give a full review of these reports in our next issue.

ONE MONTH'S RECORD.

From the dailies of eighteen leading cities, one hundred and ten homicides and fatal assaults were noted in December, 1893. Forty were shootings by drunken men in which the victims died very soon. In twenty-one stabbings and blows by weapons caused death within twenty-four hours. In sixteen cases serious wounds and injuries were produced which resulted in death. In twenty cases the persons intoxicated were thrown out and died from injury and exposure. In seven cases inhuman brutality ended in death. In four cases delirium tremens resulted in conflicts which caused death. In two cases death followed assaults and drowning. In every case either the victim or the murderer was intoxicated. Yet the public look on with indifference and punish such persons as sane and responsible.

THE HUMANE TREATMENT OF MORPHINOMANIA.— At the meeting of the Pan-American Medical Congress, September 6, 1893, Dr. J. B. Mattison of Brooklyn, N. Y., read a paper on morphinism, in which he called attention to the fact that this habit finds many victims among members of our own profession. Dr. Mattison thought that the modern treatment of this disease is compassed mainly by the use of three drugs: — bromide of sodium, codeine, and trional. "These" says the author, "form a combination of unrivalled efficacy, if properly used in proper cases, and combined with minor

aids make a method far in advance of any yet presented to secure two leading objects — minimum duration of treatment and maximum freedom from pain. . . The common idea that escape from the bondage of opium is possible only through great and prolonged distress, is a mistake; and when this humane treatment shall come into general practice, we shall note a largely increased number of ex-poppy habitués."

Psychopathic Depreciations is a very expressive term describing some cases of masked inebriety that are an enigma to many persons. Such cases have a defect of the higher brain centers, which is manifest at most uncertain and unusual occasions. Predispositions to central exhaustion and changes of all the mental functions are common, both moral, mental, and physical.

THE failure of cure in many cases of inebriety comes from the falling away or decline from the previous mental and physical standard of the asylum where they were under treatment. After months of building up, with regular living, and development of mental and physical vigor, they go out as practically cured as possible. Then relapse into unhygienic ways of living, neglecting all rational means of preserving their health and vigor, and quickly drink again.

THE *Review of Reviews* is one of the most attractive journals for all classes in the English language. It is a history of the world from month to month, giving a view of all events in the literary, scientific, historical, and political world, also pen pictures of men of prominence in all countries. No other monthly can fill its place so well. Send to publishers for a year's subscription, to their New York office.

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OPIUM—HAS IT ANY USE, OTHER THAN A STRICTLY MEDICINAL ONE?*

By Brigade-Surgeon Robert Pringle, M.D., Edin.,
Late Sanitary Department, H. M. Bengal Army.

Judged by the line which the evidence before the Royal Commission on opium has taken, both in this country and in India, to date (December 23, 1893), the answer to the question contained in the heading of this communication can only be in the affirmative. Believing as I do that the negative is the only answer possible, either from a moral or physical point of view, taking these terms in their highest and fullest sense, I shall now proceed to support the negative by as brief as possible but pointed evidence; and for this purpose I will discuss the subject under two heads or divisions, viz., Medicinal and Non-Medicinal use.

I am the more anxious to do this, as I was *the one* medical officer, out of the four signatories to the appeal to the profession, against the practically unrestricted sale of opium in India, whose knowledge of the subject had been acquired

*Read before the English Society for the Study and Cure of Inebriety, January, 1894.

in that country during an Indian service of thirty years, twenty years of which were spent continuously in districts where the poppy had been cultivated, then abandoned, and again resumed. I feel, therefore, that this action on my part is necessary in simple justice to the 5,300 medical men who signed that appeal, now that the combat is raging round the non-medicinal uses of opium, which, in the short, sharp terms of that appeal, is absolutely disputed, as these uses are made by the pro-opiumists the bases of a justification for a limited indulgence in the drug in certain localities, and under certain conditions and mode of living.

1. *Medicinal use.*

Here at the very outset I would point out in the clearest manner that, however great these medicinal benefits are, they, nevertheless, are always regarded as invariably such as to give cause for the greatest care, both in the quantity and frequency in the administration of this drug. This is due wholly to the insidious mode of action of opium — an action absolutely peculiar to itself, viz., in luring those using it to continued indulgence, after the necessity for its use has passed, and this to an extent certainly peculiar to this drug. To illustrate this, the following, as well known, as fully admitted a fact, bears unquestionable evidence, viz., that, with but very rare exceptions, the subsequent continued indulgence in opium has been traced to the beneficial effects and sensations of the strictly medicinal administration of the drug; and, further, in no train of febrile symptoms is this relief more marked, or more beneficial, than in those which accompany the malarial fever, due to causes inseparable from the supersaturation of the soil with water, whether artificially or naturally produced; and yet more so when to these exciting causes are added those connected with the deposit of silt, largely composed of decaying vegetation, acted on by a tropical sun, and increased by the rise and fall of the tide. Here unquestionably the relief afforded by opium, when the body *is racked with malarial rheumatism*, or tortured with the agony of malarial dysentery, is such that one hardly wonders

that the sufferer from these painful symptoms longs for the time of his opiate; or, when he is off the sick list, and yet exposed to these malarious influences, is tempted to indulge in it when the rheumatic pains return, with the chill of sunset, and increase with the cold. In such cases I have known what seemed the strongest will power fail in resisting these influences, and the sufferer become enslaved to the syren effects of the drug, until at last he becomes its helpless, I might almost say hopeless, victim. I enter into these details, which I know so well, because I feel that I am not dealing with an ordinary drug, but with one which I fully admit is specially suited to the medical needs of the malarial swamps of Bengal, or those districts where the land from various causes is supersaturated with water. The value of the medicinal use of opium cannot be exaggerated in the treatment of all tropical fevers, and the diseased conditions connected with or directly resulting from them.

A. The chief medicinal use of opium undoubtedly is as a *Febrifuge*, and I may safely say it is such independent of the cause to which this febrile condition is due. Before going further I would here clearly differentiate between the *febrifuge* virtues of opium and its credited by some *prophylactic* (as regards malaria) properties, the latter owing to the presence of narcotine. In a word, febrifuge in this sense means driving the fever out, and prophylactic (as regards malaria) preventing its coming in. I as fully accept the first as I reject the second, for reasons I will give hereafter when discussing this prophylactic property. Opium in its febrifuge virtues occupies a remarkable position, whether we view it separately in its sodorific, anodyne, or soporific properties, or when we consider how it not only possesses all three, but in the case of malarial fever complicated with rheumatism and dysentery has the power of practically exhibiting all three, if need be, in the same case at the same time, it is not too much to say that this febrifuge property in the case of opium is simply unique.

B. Lately valuable *Dietetic* virtues have been claimed

for opium in the case of those whose diet is almost wholly vegetable, though how when it is a drug, which interferes with all secretions except that of the skin, and very particularly so with those secretions called into play in the production of what is known as a *good digestion*, which interference is the first step on the road to the destruction of the powers of assimilation of food, is a point on which I expect some light to be thrown during the discussion which will follow this paper.

C. The *Stringent* properties of opium, due greatly to its anodyne and soporific action in checking the diarrhœa or laxity, too frequently a constant condition of those feeding largely on a vegetable diet, in which, in certain places and seasons, the various species of the cucumber predominate, must surely be more than counterbalanced by the tendency to diarrhœa and dysentery, so markedly met with among the opium-eating prisoners in Bengal, due to conditions graphically described in the jail reports of that staunch pro-opiumist, Dr. Mouat, as follows: "The *chief mortality* was from dysentery. Among broken-down opium-eaters a form of disease particularly unmanageable, as the whole of the intestinal canal is frequently found in a state of disorganization." I can only hope that here also in the discussion some light will be shed on what seems so strangely incompatible as a dietectic action with the results visible in these fatal cases.

D. The *Prophylactic* virtues of opium have in the case of malarial fever been so lauded lately that those of us who served in India nearly forty years ago are tempted to ask ourselves how was it that this valuable property, due to the presence of narcotine, was not impressed upon us *then*, when quinine was thirty-two shillings an ounce, instead of one shilling and fourpence, as it now is; or how is it that we have failed to notice this valuable property before, or that no one has thought of urging the importance of it on the government until this anti-opium agitation reached a climax, which made it necessary to press every kind of weapon into the

service? *For the first time,* however, as far as I am aware, the explanation of this valuable property has been laid before the profession, in what may be called the journal of the British medical profession; and I for one am very glad that such an authority on the subject as the author of "Opium, its Use and Abuse," has so clearly laid down the lines on which this prophylaxis is obtained. In case, however, I might fail to convey its full meaning, I will give it in Sir William Moore's own words, as taken from the *British Medical Journal,* December 2, 1893, p. 1196:

"How does opium act as a preventive?" (against malarial fever). "Opium (I especially refer to smoking)," but eating is the prevalent habit in India where it exists, not smoking; for surely Sir William does not mean us to suppose that the small quantity of inferior opium smoked in the *hookah* will of itself produce these prophylactic benefits at the close of the day. But to return to the quotation: "Opium (I especially refer to smoking) in small quantities excites the circulation, and produces a glow throughout the whole system. In large quantities it soothes the system, and blunts nervous sensibility. Both actions are antagonistic to chill, and chill is the first stage of malarious fevers, especially of ague. The Indian, after working and perspiring all day under a tropical sun, is very likely to become chilled by the night fall of temperature, and this liability is increased by his carelessness in not using extra garments. But he comes home, and after, or sometimes before, his evening meal he takes his opium. As a consequence, instead of feeling cold and shivering, he remains warm and glowing, and so escapes chill, which, if not the real and only cause of malarious fever, is certainly the cause of many repetitions of attack."

"From recent Indian newspapers I learn of a great increase of malarious fevers in certain parts of India" (it would have been well if they had been named). "Naturally the question presents — Is this due to the abolition of opium shops, and to the limitation of the possession of opium per

person to one tola's weight (rather less than half an ounce)." I offer no apology for these two full quotations; the whole medical case of *The Opium Question* lies in them, viz., the causes in the first, and the no doubt implied effect in the second. Now, I maintain, the first is theory, pure and simple, and the second — well, it is not easy to say what it is, because Sir William has not told us how long it is since the quantity each person (age not given) could buy at various periods during the day has been reduced from ten tolas of 1,800 grains — *i. e.*, three and three-quarter ounces — (*vide* Bombay opium license) to one tola — 180 grains, or nearly half an ounce — nor yet where this reduction has been made, as regards the malarious character of the districts. However, let the latter rest. If I can dispose of the data of the first, I can afford to leave the second alone. As regards the "chill, which, if not the real and only cause of malarious fever, is certainly the cause of many repetitions of attack," I presume I have seen as much malarial fever and its results as most medical officers of thirty years' Indian service; firstly, eight years in the swamps of Orissa, including the salt lands of Pooree and the hill districts of Cuttack, then two years in Central India, and twenty years continuously in the waterlogged districts in the upper portion of the Mesopotamia of the Ganges and Jumna; and I am prepared to prove that a chill, though it may frequently be the cause of malarial fever, is most certainly neither "the only cause" of it, nor yet of "the repetitions of attack." In the pestilential malarial fever of the swamps, or salt lands of Orissa, a chill is certainly neither the primary invariable symptom, nor cause of malarial fever, the irritability of the stomach, and the terrible fits of retching, which tartar emetic and ipecacuanha, aided by tepid water, seem to have a special power in relieving, point to the attack being due, not so much to the chill, acting externally, as to some specific poison taken internally, and acting there, and nature's efforts to emit it. Here I am describing my own case. I certainly had no chill, being warmly clad and protected, but I was traveling in

a palki on duty through a swamp, and I felt I had swallowed some poisonous substance or gas, just as I once did in Greenwich from a drain ; and, though the former resulted in an attack of malarial fever, and the latter in a sharp attack of diarrhœa, yet there was no chill in either case, because I was in a healthy glow from warm clothing.

This sickness and retching symptom of malarial fever in the swamps of Bengal, may perhaps be unknown to Sir William Moore in his practice in Rajpootana and Central India, as the physical conditions of Central India and the swamps of Bengal are as different as it is possible to be — and the vicissitudes of temperature must consequently be very different in the case of the dry heat of Central India, and the most pestilential, at times almost fœtid, air of the swamps and soonderbunds of Bengal.

Now, how about this chill theory, and its prevention or prophylaxis due to the Indian's "carelessness in not using extra garments" which should I think be said to be due, for the reason I shall give after, *to the poverty in not having extra garments.* Does Sir William wish it to be understood — that the "consequence, instead of feeling cold and shivering, he (the Indian cultivator) remains warm and glowing and so escapes a chill," is due to the fact that the stimulation caused by opium is not followed by any depression, tending to produce, and increase the susceptibility to malarious influences, or injurious effects from changes of temperature as is the case with alcohol? Then I can only say his experience is not mine, and that, so far from there being any prophylaxis against malarial influences, after the opiate stimulation, the very reverse is the case, and that, as with alcohol so with the opium, the depression which *must* follow stimulation is a condition of special susceptibility to all noxious influences, as is too often the case with troops, when any considerable number of them are under the influence of alcohol, when placed in trains for a night journey, in the cold season in India, in carriages specially built for the hot season. How often is this followed by outbreaks of pneu-

monia, or dysentery apparently unaccounted for. I can name a regiment entrained at Delhi in which these sad consequences were manifested till half-way on its voyage to England.

But what are the real facts of the case when judged by the action of those most interested, viz., the Indian cultivator, and here I speak from an experience which I fully recorded at the time, in my annual reports as Sanitary officer of the Circle, little thinking that thirty years after, it would be brought forward in support of the non-prophylactic virtue of opium in the case of malarial fever. After the American war of 1862 the price of cotton rose to such an extent, that the natives in the districts through which the railway passed, actually took the cotton out of their wadded garments, and, teasing it again, sold it largely for inferior cotton. Now the districts in which this was practiced to the greatest extent happen to be those which for years have persistently refused the highly favorable cash advances for poppy cultivation, viz., the Agra, Muttra, and Alighur districts, and no one knows better than I do how they were repeatedly decimated by malarial fever, and, during the period in question, due to a great extent to cold, owing to the loss of these wadded garments, the mortality was very high. The population of these districts was over three millions and the density of it five hundred to the square mile. Thus this prophylactic theory of opium in the case of prevention of chill, if we may judge by the experience and practice of those most interested in the subject, in these densely populated districts was either unknown or not accepted, and yet in these very districts the *poppy* was once cultivated, but *rejected by the cultivators*, as admitted by government documents, for the *more profitable cultivation of wheat, potatoes, etc.;* though if we were to test these reasons more closely we should find that the tyranny of the right of poppy search, and the risk of members of the family acquiring the habit of eating or smoking opium, were the true causes of the rejection of that which was made most acceptable by large and continuous cash ad-

vances, *leaving often*, at the day of settling, but little if any sum to pay back, and this among a *chronically impecunious people.*

2. *The non-medicinal use of opium.*

It is round this point the battle is now raging, and it is well it should be clearly laid down what the bases of this line of argument really are, and, as these are supposed to be very special in their relation to India, and therefore, indirectly perhaps to all Eastern nations, it will not do to dismiss the subject by saying the false strength-giving and life-sustaining on limited food properties of opium, being not recognized in the medical practice of the West, can therefore be hardly considered such in the East, though the dilemma in which the excess in the opium habit in Burmah has placed the authorities is such that the government has to rest on the horns of it, viz., that opium in any form, and for any condition or disease is not suitable for the Burmans on the east of the Bay of Bengal, and must therefore be prohibited, but it is essentially necessary to the well-being of the Orryiah on the west coast of the Bay, though the malarial influences are similar on both sides of it, and that it would be most unfair to restrict the sale or possession of it in Orissa!

The non-medicinal uses of opium may be classed under the following heads: —

A. Tonic for ordinary labor.

B. Specially stimulant for increased exertion, whether mental or physical.

C. Sustaining life on a minimum amount of food.

D. Aphrodisiac in impotence or sterility.

E. Sensuous in debauchery.

F. Control over the action of *ganja* for endurance in fasting and self-inflicted pain, such as that of the swinging festival, for imparting false courage, for drugging purposes to rob, kill, violate, or produce symptoms so similar to insanity as to procure incarceration in a lunatic asylum.

A. *Tonic for ordinary labor.* — This I can dismiss at

once, by the simple fact, of which there is abundant evidence, that the hard-working cultivator of the Northwest Provinces neither believes in its necessity, nor is at all anxious to give it a trial, having evidence of what it might lead to.

Here, perhaps, I might mention, with marked emphasis, that the *indulgence* in anything *that intoxicates* is in direct opposition to the social and religious customs of *all Hindus* or *Mohammedans* laying any claim to respectability. Those who know the natives best, are fully aware how all of them *who have the real good of their country at heart, grieve over the terrible laxity of the social and religious* customs on this point, *now spreading over the country*, but no amount of prevalence of the breach of these safeguards will ever remove the religious scruples of either Hindu or Mohammedan, who, in the former instance, for the sake of self-preservation, and the latter for military control and discipline, laid down the lines of a total abstaining nation, which, I can bear ample evidence to, is as rigidly carried out by all true followers of "The Institutes of Manu" or the dictates of the prophet to-day, as when it was first enacted.

B. *Specially stimulant for increased exertion, whether mental or physical.*— This non-medicinal use of opium is one regarding which much has been said, and not a few supporters of opium have added that *without the regular use of this drug*, the natives of India could not undertake the great exertion they are in the habit of undergoing. A native who is dependent on opium for increased exertion is a most untrustworthy person to rely on, and in the case of a soldier, a most inefficient one, as the condition of a man after the opiate stimulation is most unsatisfactory for watchfulness or any sudden emergency, and the occasional helplessness of native seamen "*lascars*" at such times is due doubtless to opium, eaten if not smoked. The case given in an evening daily, of the faithlessness of a native regiment during the siege of Lucknow, because they could not get opium in the entrenchments, is, I maintain, the strongest argument against the use of opium, instead of being one as quoted in its favor. As

a medical officer, I would no more pass a man as fit for active service who was useless without his opium, than I would one who was dependent on alcoholic stimulation for the performance of his daily ordinary duties.

The administration of opium in the case of animals, such as horses, camels, bullocks, and even elephants, during or after unusual and prolonged exertion, is a medicinal, and certainly necessary, not a non-medicinal and unnecessary use. It is given mixed up with various spices to secure a continued rest, wherein to recoup the loss sustained in the increased and continuous exertion, but is only given on these occasions, and doubtless the driver of these animals takes a little for himself.

I would add a few words here regarding the opiate stimulation in the case of great mental strain. It would be idle to contend that opium, taken under these conditions, does not increase intellectual brilliancy, which shows itself in the style, and above all, facility with which the article is, so to speak, written off; but it is possible to attain this excellence at too great a cost. Those whose duties in connection with the press generally convert night into day, and the reverse, unquestionably find this can be done with greater ease by the use of opiate stimulants, but this is the most insidious and hence dangerous method of getting into the embrace of the opiate syren, and an early mental wreck or excessive indulgence in alcoholic stimulation, in the hopes of overcoming the subsequent languor, is the price to be paid for this violent strain and stimulation on the mental faculties, and these are the cases in which the injurious effects of the drug are seen in the great nerve centers in paralysis, and not in the shrivelling up of the internal organs.

The Coolie depôts in Calcutta, etc., from which the emigrants are largely drawn, are chiefly made up of men who have dropped out of regular work from their dependence on opium, and its effect on the digestion. Indulgence in opium, no matter how moderate, requires one condition for its *apparently* harmless effect, and that is, if not a perfect, yet a

sufficient assimilation of food to *retain* the appetite, and an abundant and good quality of food to nourish the body. Reduce this latter, and opium quickly asserts her sway, and then acquires the property of

C. *Sustaining life on a minimum amount of food.*— Independent of the highly questionable, financial, or physical morality of this supposed virtue in opium, it happens to be opposed to actual fact. If opium succeeds in this instance, it puts the case hopelessly out of the condition of ever again resuming ordinary work, with or without opium, and thus leaves the poor wretch to carry on a life of almost suspended animation, like the bear in the Himalayas throughout the winter months, when he lives on the fat stored up in the summer. The present prevalence of the opium habit in Orissa is entirely due to this dependence on opium to relieve and deaden the pangs of hunger during the famine, and I consider that nothing could conceivably be more disastrous for a country, than a plea being found for the production of opium, and its unrestricted sale, than one based on this deadening property to the pangs of hunger. At the great pro-opium meeting of the Calcutta Medical Society, if there was one point more forcibly dwelt on than another, it was the absolute necessity of a good and generous diet, if, according to these authorities, the opium habit is to be carried on harmlessly. Why do not those who persistently support this property in opium, suggest the despatch of opium to the poor famine-stricken districts of Central Asia, so that the limited supply of food may be made to go as far as possible, or are they prepared to explain how the government at their suggestion did not distribute gratuitously large quantities of opium throughout the districts visited with famine or scarcity, during the past thirty years, as they did quinine under similar conditions of malarial fever. If the poppy cultivation in India leans on a support like this, it, like the rule of the nation which endorses it, had better cease, and the country be entrusted to a nation whose code of government and honor is of a higher standard. But no government that

I have ever served under has ever thought of this mode of relieving the horrors of famine, and it is another of the weapons which the supporters of opium are driven to, in their dire straits for pro-opium arguments.

D. *Aphrodisiac in impotence or sterility.*— Nations whose social customs, as they relate to marriage, are such as seriously to induce and then confirm impotence and sterility, are much given to indulgence in aphrodisiac remedies, and no *drug* is more in request for this than opium, though, while it excites the function, it only does so to destroy it ultimately, and among the poorer and disreputable classes these form a very large proportion of the frequenters of the opium dens alluded to under the next head, E. The desire of paternity among Eastern nations largely conduces to the administration of aphrodisiacs among the inmates of the Zenana, and opium unquestionably is *the* drug most used, as it is by those engaged in horse-breeding operations in various districts in Northern India.

E. *Sensuous in debauchery.*— Sir William Moore, in the abstract of the paper which he read at the Imperial Institute on the 23d of November, 1893, "On Opium," is made to state the following: — "It was said that using opium was wicked and immoral and destructive of health. He had often smoked opium, and really did not see where the wickedness and immorality came in." Surely Sir William must have forgotten what he said, at the discussion which followed my paper on "Opium from a Public Health Point of View," at the meeting of the British Medical Association at Bournemouth in 1891, when, alluding to one of the charges brought against opium, viz., that the opium habit in excess led to impotence, he said, so far from this being the case, all the first class opium-smoking saloons in Bombay had a brothel attached to them! Exactly so, and it is here the unutterable debauchery takes place among the wrecks of sexual and other indulgence, whose condition, if we are to accept the statements of some observers, is due to "painful affections of many years' standing!" and not to the habit of opium

smoking. To contend, therefore, that their presence in the opium saloons in Bombay or dens in Calcutta, which Surgeon Lieut.-Col. Crombie visited with the police, was to find relief in the oblivion of the opium trance, and not for sensuous purposes, must rest on different data, else why the presence of one woman in each den, and the brothel attached to the smoking saloon in Bombay? Sir William Moore obliges me to unmask the horrid truth. These women are there in both cases for the express purpose of leading the thoughts into sensual channels during the opium trance in which the misery of impotence is obliterated. More I need not say, except to add that if this is questioned, I hope to have one present in the meeting, who will describe the objects sought for, at one of these dens in Akyab, and the reason why women, if only one, and she a withered old hag, are present. I repeat, it is the hope of obtaining relief from the opium crave together with sensual pleasures, that urges these poor creatures into these dens, and not the painful affections of years, and while there, as in the alcoholic trance, the condition described in Prov. xxiii, 33, is experienced, when in the opium trance in these dens of sin, "their eyes shall behold strange women."

F. *Controlling power over the action of "ganja."* — This is a non-medicinal use of opium, regarding which little is said, but I fear much is concealed, and as I have paid considerable attention to this subject in its bearing on crime and insanity, I am glad of this public opportunity of exposing the dangers of the *lately supposed harmless* substance called opium, in its reference to crime, and its share in the production of insanity. The statistics of Indian lunatic asylums would lead us to suppose, that opium figures so slightly in the *credited causes of insanity*, that for practical purposes it may be excluded from the category of admitted causes of insanity, and alcohol and "ganja" may be considered as the chief, if not the only causes of insanity in India. Now those who have made close inquiries into the subject will have found that the union in the administration of these drugs,

which commences in the shop in which they are sold, under license, where "ganja" and opium may be seen together, seems designedly continuous for the following reasons: "ganja" is never taken or administered uncontrolled by the judicious mixture of opium, except to run "amok," or to do some murderous deed *at once*, and were all these cases carefully investigated, I have little doubt some would be found in which the victim of "ganja" had (forgetful of its consequence) taken the drug in an uncontrolled condition, and perpetrated the crimes for which he is charged, though hardly knowing what he was doing, and certainly not with a murderous intention. Of course it is quite different when a man has a blood feud to settle, or a grudge to carry into effect, what he then does, he does with a fixed intention; but apparently meaningless and aimless slaughter of innocent human beings, like that of the man in Northern India, a short time ago, who cut down fatally seven men before he was overpowered and disarmed, is due to the maddening influence of uncontrolled "ganja."

No crime produced by opium forsooth! I purposely leave out the petty thefts committed to secure money to buy opium wherewith to allay the pangs of *the opium crave, as they are too manifest to need allusion to, but the criminal use of opium in the practice of Thugs and professional murderers demands our careful consideration.* With the single exception of sulphate of copper, I believe there is no drug more used for criminal purposes than opium. The effects of professional criminal poisoning in that land of choleraic diarrhœa and dysentery, by very small but continuous doses of sulphate of copper are incredible, and the facility and secrecy with which life can be taken either in old or young is almost beyond relief, and cholera and diarrhœa, like snake-bite, are credited with an amount of deaths to which they have no claim whatever. The following happened in my own experience, when in medical charge of a troop of R. H. Artillery at Morar Gwalior, thirty years ago, and will show how possible it is to conceal this process of slow but sure murderous

poisoning. On the occasion in question, I was the means of saving the life of the child of the officer commanding the artillery division at Gwalior, Central India, by unexpectedly examining the food, and detecting what was hoped to be the final dose of sulphate of copper! One of the servants in the kitchen was, no doubt, the poisoner in this case, but who of them it was impossible to decide, and as the child recovered when the administration of the poison was stopped, it was useless to press the case further. By the cautious administration of opium, it might be quite possible to produce the opium craving, while the controlling influence of opium in the case of "ganja" can produce symptoms so resembling insanity as to deceive the most skillful observer, and when once the victim is confined in a lunatic asylum, if the case is one whose permanent seclusion, or even death is desired, the facilities for attaining this are both simple and numerous.

The government in India has successfully stamped out the system of Thugism in that vast empire, and though organized and subsidized bands of Thugs do not now, after due performance of special religious observances to their patron goddess Kali, sally out on their mission of murder, yet we may rest assured, the facilities of obtaining a narcotic like opium is taken advantage of to the full, by those who set but a small value on human life, when its removal may bring in a few rupees. One case that I know of only realized eighteen rupees, to be divided among some eight persons concerned in the murder. But if Thugism has been banished from India, it has found a not uncongenial soil in this vast city; where the professional drugger plies his trade, in conjunction with the bully and garotter, by means of the poor unfortunate, who, as in India among the Thugs of old, acted as decoy, and perhaps, also, the secret introducer of the narcotic into the liquor to be drunk. No crime due to opium! I repeat. Listen to the following which happened in my own experience at the Charing Cross Railway Station, and to the murder of a poor professional brother in the Borough last year. Could the narcotically-drugged liquor tell its tale

in London, we should then know something more of what opium can and does do to aid crime of every description. The case of the poor trooper of the 10th Hussars, whom I rescued from his, if need be, murderers, as was the case with doctor in the borough, exhibited a knowledge of the power of drugging, for which I was hardly prepared, and the case-book of the London Police Station, to which I took this trooper in a helpless condition of opiate stupor, will amply confirm this. The case of the doctor in the borough is a very instructive one, when compared with this. The condition in which this trooper was made over by me to the police, was one in which anything could have been done to him; not so with the poor doctor in the borough. In his case the narcotic had not been pushed far enough, and after submitting to a certain amount of robbery, he left the public house, and when in the lane resisted another attempt to rob, but this was soon silenced by the garotter, and the victim of the *harmless drug, opium*, lay a corpse in the lane. Could every story of the poor young men who come to London for the first time, and are robbed, either in a public house, or less respectable place, while under the influence of a narcotic, given in some liquor, it might even be coffee, reach the public ear or eye, as I saw it in the Strand, instead of "shame concealing what justice could disclose," we should then know what opium has to answer for. The case of the murderer Neal, is just one of those in which opium was at first used for its aphrodisiac properties, and after some time the monstrous method of black-mailing, originating in the opiate trance, was commenced, and the strychnine, which Neal had taken himself, first as an anti-opiate stimulant, and finally used for his murderous purposes, led to his detection. The condition produced by this indulgence in opium was such, that, like the blood in Macbeth, the strychnine and its victims haunted Neal night and day, to such an extent that one of the police engaged in the investigation told me, this strychnine was the clue that led to his conviction and execution.

The crime which follows the drugging of the intended victim is in exact proportion to the extent to which the narcotic is pushed; if resistance is offered, the Thug's cord, or the knuckles, as in the case of the poor doctor, close the scene, or, when the dark, silent river flows near, after the robbery or crime has been effected, the throat is cut, to lead suspicion into the line of suicide, and the body thrown into the river, and the verdict perhaps "suicide when of unsound mind."

Is no crime traceable to opium? That which woman has proved to be dearer than life has been lost at a time when the friendly meal or cup have, by means of this narcotic, secretly added, placed her in the condition in which I made over the Hussar to the police, and left her in the hands of one, who under the guise of love, seeks to gratify his lust, though it may often ruin his victim body and soul.

The use of opium in combination with *ganja*, as a means of endurance of the physical pain to which many of the devotees in India subject themselves, is well known, but not a few of these poor people ultimately find their way into the lunatic asylums from the destructive action of this *ganja* on the brain; but such stimulant narcotics are not needed by the men and women who will go through all they do in their pilgrimages, and who would scorn the use of opium or ganja to help them, those, therefore, who do use these drugs are for the most part a debauched, disreputable lot. As regards the property of imparting courage (after all only a false courage, and a little creditable to Sikh or Rajpoot), opium with ganja is very unsatisfactory, for, while a false courage may be felt, *a very real want of self-protection is manifested, and those who have engaged these men in mortal combat soon find them easy to defeat on this very ground.* The loss of true self-protection can never make up for any amount of false courage, and a feint or two soon leads the subject of this Dutch courage to his own defeat, as, in an unguarded or reckless moment he exposes himself to the fatal cut or thrust.

There is one use for opium, a medicinal one, all other use is vicious, from the peculiar character of the drug.

DELIRIUM TREMENS.

By George B. Twitchell, M.D.,

Of Cincinnati, Ohio.

"A rigor and delirium from excessive drinking are bad." — *Aphorisms of Hippocrates.*

The tendency at present is to underrate the importance and gravity of delirium tremens. We are warned against the old-fashioned free use of sedatives: "Feed your patient and he will get well;" "When he is exhausted he will fall asleep anyway." Such advice is often heard. The descriptions of delirium tremens to be found in the text-books are very meager, and they frequently entirely omit many of the important phenomena of the disease. Monographs describe many different forms, and are often confusing. This confusion and, indeed, many of the current ideas as to the prognosis and treatment of this disease depend upon a very misleading conception, which is, that "delirium tremens is really only an incident in the history of chronic alcoholism." (Osler.) This is true, but the same might be said of cirrhosis of the liver. Delirium tremens is as much a specific disease as cirrhosis of the liver is; but the breadth of the idea that it is "only an incident" hides this important fact, and, consequently, many of our conceptions of this dangerous disease are founded on the observation of comparatively mild pathologic conditions. The aim of this paper is to give to delirium tremens its true importance as a disease.

The clinical observations to be used here were made during an eighteen months' service as externe and interne at the Cincinnati City Hospital. A great many cases of all grades of alcoholism are continually received at this institution, and while an effort is made to exclude simple cases, the policy of the receiving physician is always to err on the side of safety. So it is that many cases are received that other-

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The clinical observations to be used here were made during an eighteen months' service as externe and interne at the Cincinnati City Hospital. A great many cases of all grades of alcoholism are continually received at this institution, and while an effort is made to exclude simple cases, the policy of the receiving physician is always to err on the side of safety. So it is that many cases are received that other-

wise would not be. It is extremely difficult to estimate the extent of a drunken man's illness. Alcoholism in all its minor forms is associated with an hysterical condition that is hard to recognize. A man is rarely so drunk as he pretends to be. When a man is suddenly sobered by some necessity, it is simply this hysterical condition that has disappeared. However, it must be remembered that nothing else so completely disguises other disease as does alcoholism. A very severe injury may be hidden under drunkenness. All the symptoms of pneumonia disappear before a concomitant delirium tremens.

During the eighteen months that I served at the City Hospital, 360 cases of alcoholism were received. Of these, 132 had delirium tremens. Many cases were under my care, or at least, where I had opportunities of observing them. Others I did not see, but I obtained my knowledge of them from the clinical records. Every possible precaution was taken to insure accuracy. However, certain errors were hardly to be avoided. Probably the 360 cases of alcoholism contained more than 132 cases of delirium tremens. The cases overlooked were probably abortive cases. The inclusion of these cases (could they have been positively identified) would have reduced the death-rate given. This error is probably not very great, and is, perhaps, the only one that could have occurred in compiling the statistics.

Etiology.— Sometimes a man goes directly from drunkenness into delirium tremens, but more frequently the disease makes its appearance as he begins to sober up. Anstie says that the first symptom is a distaste for alcohol. I have not noticed that. The disease often begins one, two, or three days after the individual has ceased drinking. This accounts for the erroneous opinion once held that the disease was due to a withdrawal of the accustomed stimulant. No single drinking bout ever produces delirium tremens. It may cause death by alcoholic poisoning, but not by delirium tremens. It is the chronic drinker who develops this disease, and he may develop it without having ever been drunk.

Usually, if not always, there is an exciting cause aside from alcoholism. Näcke lays great stress on this. By all odds the most frequent exciting cause is exposure to inclement weather. How severe this exposure frequently is, can only be appreciated by one who has engaged in public practice among the lower and criminal classes. An accident may be the exciting cause. An habitual drinker, drunk or sober, is injured (perhaps a leg has been amputated), and the case goes on well for thirty-six or forty-eight hours, when the patient becomes nervous, sleepless, has hallucinations, and runs into delirium tremens that will be almost certainly fatal. A similar result may follow a simple fracture or any slight injury. Probably, the majority of cases of surgical delirium are cases of delirium tremens. The delirium tremens may come on in the course of a pneumonia. Other acute diseases sometimes act as exciting causes.

SYMPTOMATOLOGY.— In describing the symptomatology of delirium tremens, it has been found convenient to divide its clinical history into three stages. This division must of necessity be somewhat artificial, and it must not be expected that every case will present the stages in a typical form, especially as recovery may take place at any time in the first, second, or third stage, and death in either the second or the third.

Incipient stage. As the disease makes its appearance the subject becomes restless and does not sleep well. If he falls asleep his sleep is haunted by dreams that soon awaken him. The minute he closes his eyes hallucinations pass before his mental vision. During this stage he is rational and *fully appreciates the character of the disease that is approaching.* He now truly has the "horrors." He may be tremulous, but usually he has only the slight tremor that follows every debauch. This is not nearly so pronounced as the true tremor of delirium tremens. At any moment he may become wildly delirious, and, losing the mental control he still has, pass rapidly into the violent stage, becoming dangerous to himself and others. In the incipient stage the

patient also exhibits the usual gastric symptoms that follow ordinary alcoholic intoxication.

The incipient stage may last one or two days, to be followed by the violent stage or by gradual recovery. First attacks rarely go beyond this stage. Probably fully half of the cases of delirium tremens that recover do so at this time. At the City Hospital such cases were called *impending delirium tremens*. These are the cases that Näcke calls *abortive delirium tremens*.

Violent stage. The violent stage begins with the true delirium. Sometimes it is ushered in with a violent epileptiform convulsion. Epilepsy in connection with delirium tremens has often been described, and, of course, delirium tremens may occur in an epileptic; but delirium tremens does not cause epilepsy, whatever hereditary alcoholism may have to do with it.

Convulsions were rarely seen at the City Hospital, although occasionally a patient in the violent stage would be received with a history of having had a convulsion. The convulsion may be exactly like that of epilepsy, with the exception, perhaps, of not having the cry. However, it is not epileptic, but should rather be called epileptiform. The patient may recover from a convulsion and be but very slightly delirious. Soon, however, the delirium increases. Krukenberg considers the convulsion "as an initial symptom of the delirium itself." Moeli states that the epileptic attack increases the gravity of the prognosis.

Rapidly, but perhaps by inappreciable degrees, the visions that the sufferer knew did not exist, become realities to him. The patient starts suddenly, turns his head, listens, or looks about him suspiciously. He may still appear rational and deny having hallucinations, probably because he even looks upon his attendants with suspicion. He becomes violent, struggles to free himself from imaginary foes, and perhaps screams at the top of his voice. Hallucinations, illusions, and delusions, often but not necessarily, of a persecutory nature, crowd upon his mind. Illusions are now

much more frequent than hallucinations. These may be of sight, hearing, or smell. Those of sight are most common, and are probably often connected with changes in the retina and optic nerve. A patient will often be seen going through some definite motion, as if at his work. His hands may move as if he were unraveling some endless skein. I have seen a printer go through the motions of setting type. Sleep is almost impossible.

The tremor is very pronounced. It is quite different from the slight tremor of all drinkers, which is easily controlled by the use of whisky. The true delirium tremens tremor is much greater; it is increased by an effort to use the muscles. In severe cases, especially when temperature is elevated, the tremor persists even during sleep. It usually begins in the tongue and upper extremities, and finally also affects the legs. It is most marked in the hands.

The patient, on account of the mental condition, feels no pain from the most severe injury. He throws a broken leg about as if it were sound. The symptoms of a pneumonia are completely masked. There is anorexia, but vomiting is very rare. Constipation is the rule. The temperature is variable. There may be very little fever or the temperature may run up to 104° or higher, without pneumonia or other complication to account for it. The patient often sweats profusely. The urine is scanty, high colored, and usually contains some albumen. At this time the patient may rapidly wear himself out and die. This is usual in cases with severe injuries or pneumonia. The disease may run a comparatively mild course throughout this stage. The great excitement, however, is not of long duration, rarely lasting longer than three or four days; but at the end of this period the exhaustion does not always lead to natural sleep, as many clinicians would have us believe; it often leads to a peculiar typhoid state presently to be described.

After the violent stage is well developed, the prognosis becomes grave. Death may take place very rapidly, the entire disease having lasted perhaps but two days. Pneu-

monic and surgical cases usually die in this stage ; so also do the febrile cases of Magnan. One fatal case (complicated with simple fracture of the tibia) that corresponded to the description of Magnan was observed.

Typhoid stage. The patient gradually passes from the previous condition into this state. But while this stage not infrequently follows a very violent second stage, it more often occurs in cases that, from the beginning, have had a more quiet delirium, and, indeed, from the start, have had somewhat of a typhoid character, which became more marked as the disease developed. It is the patients that have been drinkers for years, and, perhaps, have had many mild attacks of delirium tremens, that exhibit this stage most perfectly.

As this stage develops, the delirium becomes quiet. The patient loses his fear of the hallucinations, nor, indeed, are hallucinations frequent, if they exist at all. Illusions, however, are very frequent early in this stage, and are not usually of a persecutory nature. The patient tugs at his shackles, and thinks he holds the reins of a team of horses. This illusion is very common. Illusions of hearing are frequent.

The typhoid state gradually deepens. The patient is extremely tremulous. He is never awake, and rarely asleep. He is easy to control, but needs constant watching, just as a case of dementia would. He may get up and wander aimlessly about. His speech becomes more and more of a mumble, and finally entirely unintelligible. When sharply told to put out his tongue he protrudes it slowly. He passes urine and feces in bed or anywhere. Albuminuria is usual. The pulse is weak and rapid. There is always some elevation of temperature, although it rarely rises above 102° until the end. Cheyne-Stokes breathing is occasionally observed. The conjunctivæ are injected, the eyes watery, and the eyelashes frequently glued together. The pupils are normal or react slowly.

The patient lies with his mouth open, his tongue and lips dry, and his breath extremely fetid. One of the cases ob-

served developed a parotiditis, probably by infection through the ducts from this foul mouth. The patient usually takes sufficient food. The bowels are constipated.

The subject lies in this condition for six or eight weeks, or even longer. He gradually grows weaker. One day his temperature runs higher than usual, reaches 104° or 105°, or even higher (in one case 108.2°), and he then dies.

A small proportion of cases recover, even at this stage of the disease. The great majority die. This sequel to the violent stage of delirium tremens, for all that it is hardly mentioned in the literature, is by no means rare. At the City Hospital it was often called alcoholic meningitis. Leptomeningitis, undoubtedly, does occur with alcoholism as an important etiologic factor, but when it occurs it presents more definite signs of meningeal inflammation. Paralysis of the third nerve occurred in one alcoholic case in which undoubted meningitis was proved at the necropsy.

Näcke describes a type of chronic delirium tremens which corresponds to this typhoid stage. He uses the term typhoid in describing it. The *chronic continued delirium tremens* of Rose may be the same. However, many of the chronic forms that have been described seem to be rather cases of true insanity. The descriptions of these forms are often unsatisfactory.

Diagnosis.— Usually the diagnosis presents no difficulties. The conditions to be excluded are: acute alcoholic intoxication, psychoses made prominent by drink, alcoholic insanity, delirium of infectious diseases, and mania.

The diagnosis of the third stage may be difficult if a previous violent stage has not been prominent, or has, perhaps, not been observed. In making a diagnosis of delirium tremens in the early stages, it is well to remember that it is the rule for a man to have a rational period between an intoxication and the true disease. It is sometimes necessary to watch a case a few days to exclude alcoholic insanity. The tremor has diagnostic importance, but a slight tremor is usual in all forms of alcoholism.

PROGNOSIS.— Statistics show a mortality of from 2 per cent. to 35 per cent. Probably, this variation depends, to some extent, upon what is included as delirium tremens by the various observers.

Of the 132 cases, 2 (while in the typhoid state) were removed by friends. The result in these cases is unknown. The total mortality of the 130 cases was 35.4 per cent. Of 12 cases complicated by pneumonia, 10 died. Of 9 cases complicated by surgical injuries, in only one was the injury a dangerous one of itself. The other injuries were simple fractures (usually of the tibia, or above the ankle), crushed toe, fractured lower jaw, and scalp-wound. Only 2 recovered (the scalp-wound and jaw cases); 6 died in the violent stage, and 1 at the end of a long typhoid stage.

Of the 109 uncomplicated cases, 29 died, *i. e.*, 26.6 per cent. Of the 29 deaths, 20 occurred at the end of the typhoid stage, and 9 during the violent stage. Of the 80 recoveries, 33 took place during the incipient stage, or, in other words, were abortive cases; 7 recovered after the typhoid stage, and 40 recovered after the violent stage had commenced, and without going into the typhoid stage. Many of these 40 cases were very mild.

PATHOLOGY.— The question as to the pathology of this strange disease is not an easy one to answer. Autopsies, however, make some suggestions. When death occurs after the typhoid stage, the post-mortem examination shows a wet brain — in fact, a very wet brain. There is serum everywhere, in the ventricles and between the membranes. The arachnoid is so water-logged as to appear gelatinous; it may be faintly cloudy, but it is never opaque. The vessels of the pia are dilated. The brain has a wet, glistening appearance, identical with that of the *wet brain of nephritis*. This condition has often been mistaken for leptomeningitis. It is not a meningitis at all. The difference between an inflammation and an edema need not be discussed here.

In the cases that die during the violent stage, the arachnoid has not so much of a gelatinous appearance, as if, perhaps, the edema were not of so long a standing.

The lungs are also edematous, and especially marked in cases dying after the typhoid stage is a condition of hypostatic pneumonia of a higher grade. A piece of the lung will sink in water. This condition is sometimes so marked as to lead to its being mistaken for pneumonia, and the sudden high temperature that occurs just before death gives some color to this idea. Microscopic examination reveals the error. Of course, this condition is practically the same on both sides and is limited to the lower lobes. A cut is smoother than a cut through an area of red hepatization. It should not be forgotten, however, that pneumonia may occur.

The kidneys are probably always affected. In the post-mortems held on the cases observed, the lesions were frequently quite extensive. Interstitial nephritis, sometimes of a high grade, was always present, while parenchymatous changes were by no means rare. Large white kidneys were never found. Krukenberg describes the kidney-lesions, both macroscopic and microscopic, at length. His valuable article should be consulted on this point.

The heart was of the usual granular kidney type. Beginning cirrhosis of the liver was occasionally observed.

The old inanition-theory, that delirium tremens is due to the want of an accustomed stimulus, is rarely advanced now. The arguments that have been urged against it seem conclusive. However, this does not exclude the idea that delirium tremens is a form of cerebral asthenia. By cerebral asthenia may be understood a condition of insufficient nutrition, not that the food needed is alcohol, but rather that the alcohol has interfered with the nutritive processes to an extent making proper nutrition difficult, while perhaps the last intoxication has, for a time, shut off the nutrition almost entirely. Associated with this view of the pathology is the idea, very commonly held by both physicians and laymen, that delirium tremens does not develop except in men that do not eat while drinking. It seems to me that this idea is founded on insufficient observation and is not entirely correct. The absence of food from the stomach makes the ab-

sorption of alcohol more rapid, but surely the deleterious effects of alcohol can and do occur in drinkers who eat. Of course, constant drinking interferes greatly with digestion and nutrition.

Undoubtedly, the symptoms of delirium tremens do present certain slight analogies with those of nerve exhaustion, neurasthenia, especially, perhaps, in the way of the insomnia and the frightful dreams. It seems improbable, however, that a neurasthenic condition could be carried far enough to produce all of the phenomena of this disease. In cerebral anemia we never find conditions analogous to delirium tremens, unless, indeed, accepting the theory of Traube, we consider the symptoms of uremia as symptoms of cerebral anemia and edema.

The toxemic theory, *i. e.*, that delirium tremens is due to a toxic action of the alcohol imbibed (unless a very wide construction be put upon it), fails to explain the phenomena of the disease. No amount of alcohol will produce delirium tremens in a healthy man or animal not accustomed to drink. The symptoms of alcoholic poisoning are entirely different. It is hard to think of alcohol as a cumulative poison. And, if alcohol should accumulate in the system, why would its effects differ from those of acute alcoholic poisoning, and why would two months, or even longer be required to eliminate the poison?

More plausible is the idea that the disease is due to actual changes in nerve tissues, the results of the repeated insults of the alcohol; that it is similar to alcoholic neuritis. This theory and the one allied to it, that delirium tremens is a form of insanity, is very often suggested. Delirium tremens and alcoholic insanity are far from identical clinically. Changes in the cerebral cortical cells have been described in delirium tremens, but they do not appear to be constant nor indeed frequent.

The symptomatology of delirium tremens strongly suggests that its phenomena are due to retained products of metabolism, poisons that may or may not be eliminated,

rather than to chronic organic changes in nerve-tissue. Apparently, the kidneys are constantly crippled.

On account of the large amount of kidney parenchyma in excess of what is ordinarily needed, it is very difficult to draw inferences from the appearance of a kidney as to its efficiency. However, the constant presence of these lesions cannot but exercise some influence on the symptomatology, if, indeed, they do not cause all of the phenomena of the disease.

Fürstner found albuminuria in 40 per cent. of all cases examined. He also reports three cases in which delirium tremens developed in well-marked cases of chronic nephritis. In these cases there was an enormous increase of albumen in the urine, and casts were also found. He attributes the albuminuria to a transitory hyperemia brought on by alcohol. These observations are very suggestive, as are also the similarities between the symptoms of poisoning in chronic nephritis and the symptoms of delirium tremens.

The eclampsias of the two diseases are identical. Delirium is a prominent symptom of uremia. Delusions of persecution are common in *folie Brightique.* It has been suggested that many of the hallucinations of delirium tremens are in reality illusions founded on alterations in the retina. These alterations may be of uremic origin. The tremor seems a specific symptom of delirium tremens. Muscular symptoms, however, not very different, also occur in chronic nephritis.

Osler, in speaking of uremia, says: "In some of these cases a condition of torpor persists for weeks and even months. The tongue is usually furred, and the breath very foul and heavy." In the records of the Cincinnati City Hospital are to be found accounts of cases which entered in a condition of torpor, and finally died. The diagnosis made, chronic nephritis, was fully substantiated by the post-mortem examination. Yet these cases in every particular, both of symptomatology and pathologic anatomy, were identical with the condition that over and over again was seen to proceed by inappreciable degrees from a typical delirium tremens.

Death from delirium tremens usually occurs at perhaps a little earlier age than does death in ordinary cases of granular nephritis. The first attacks of delirium tremens, which may occur early in life, are not fatal, being usually abortive cases. This may be because the kidney lesions are not far advanced. Moreover, it is possible that elimination by organs other than the kidneys is also imperfect.

Many cases of uremia, and the other accidents of nephritis, such as edema of the brain and lungs, come on suddenly after a debauch or unusual exposure, and it is not impossible that the symptoms of delirium tremens may be of a similar nature, brought on by the extra work that the last debauch, with concomitant exposure, or injury, or pneumonia, throws on a pair of already crippled kidneys. It is well known how a chronic nephritis influences the prognosis of a pneumonia or an injury.

Uremia, as we ordinarily see it, and delirium tremens are not identical clinically; and for all that, in certain cases it is extremely difficult to differentiate between the two; yet, usually, does delirium tremens present a specific clinical picture. This is an argument against the theory that has been here suggested. Another point is, that while the severe uremic symptoms of interstitial nephritis are usually associated with a great increase of albumen in the urine, all cases of delirium tremens do not have albuminuria.

So, for all the arguments in favor of the theory that has been here suggested, it cannot be said with any degree of certainty that it is the correct one. Further investigation must settle this. But whatever finally proves to be the true explanation of the phenomena of this disease, I believe it will be found that delirium tremens does not and cannot occur in subjects with healthy kidneys.

TREATMENT.— The frequent, if not invariable, presence of kidney lesions, whether these lesions do or do not constitute the essential pathology of the disease, should not be forgotten. It is wise to begin treatment with a purgative, and to keep the bowels freely open throughout the disease. Practice shows the value of this. Diuretics, especially digi-

talis, have been used and highly praised. Probably hot-air baths and similar procedures would be of great value, especially in the typhoid stage. I have never seen them used. Such means should be used with the idea of eliminating the toxic principles, whatever they may be.

But there are a number of other indications to be met, and in meeting them we are possibly employing physiologic antidotes, for surely certain drugs seem actually curative. By the proper use of sedatives we can prevent the nervous system from becoming overwhelmed, until time enough has passed for the toxins to be eliminated. And, indeed, it seems that violent nervous disturbances are of themselves injurious and dangerous, aside from exhausting the patient, increasing, perhaps, the very products of metabolism of which we are anxious to get rid. It is not considered safe to allow the convulsions of puerperal eclampsia to go unchecked. Yet no one would claim that the drugs used in checking them remove their cause; but the common opinion is, that these drugs are to some extent curative. Surely morphine is so considered by many.

A great many cases of delirium tremens will get well without treatment. These are usually abortive cases. First attacks almost always recover unless associated with pneumonia or injury. A careful attention to the digestive system will hasten recovery. Capsicum or some similar drug aids greatly in overcoming a nervousness (present after every alcoholic intoxication) that seems associated with the disturbed stomach.

In the severer cases the stomach symptoms are not nearly so promiment. Vomiting never interferes with medication. Little can be done for the anorexia.

It is often impossible to tell whether a case in the incipient stage will stop or go on to more dangerous conditions. A radical treatment at this time is easier, safer, and more successful than later. Put the patient to sleep before the severe delirium comes on; it is easy now; it may be very difficult later. The earlier that chloral or other hypnotic is used, the easier can its results be obtained. Exhaustion

does not assist the drug until the typhoid stage is reached, when the sleep obtained is not natural, but a sort of semi-coma, and the time for benefit from the drug has passed; or, too often, the typhoid stage is never reached, and the exhaustion that we had hoped would aid us leads to a coma that rapidly ends in death.

The medical treatment in vogue at the City Hospital, when I was interne, was potass. brom., gr. xxx; chloral, gr. xx, every three hours — sometimes a little more and sometimes a little less. Very little else was used in the violent stage until the heart began to fail, when, of course, stimulants were administered. The results were not good. Bromides are absolutely worthless in such a disease. At the best their sedative action is a very mild one. Chloral was usually given in altogether insufficient doses. If the chloral or other drug does not make the patient sleep, it does no good and probably does harm.

In a few cases chloral was given in sufficient doses to produce sleep; 30, 45, or 60 grains, varying with the case, were given from every half hour to three-quarters of an hour, until the patient was asleep, and then if he was delirious on waking he got another dose, 30 grains being usually sufficient at this time. The cases so treated did remarkably well. When the treatment was commenced early, but small doses were required. One dose was often sufficient; more than three were never required. The patient often slept eight or ten hours without waking, and on waking was rational. Some of the cases so treated were very severe, one being complicated with a fractured jaw; yet all recovered. Of course, the unusually good results obtained were, in a measure, accidental. This treatment was not sufficiently used at the City Hospital to be very good evidence in favor of such dosage. In all, ten cases were so treated. But while this number is very small, it must be remembered that the results obtained by this treatment in former times were good. One great advantage this method has over repeated small doses is, that the patient is not so often disturbed. It is often very difficult to persuade a violent delirium tremens patient to

take medicine after the first two or three doses. Hypodermatic medication alarms the patient too much.

In pneumonia the tendency to heart-failure is so great that perhaps chloral would be dangerous. However, recoveries under any treatment are rare. Perhaps it is especially in surgical cases that this treatment is most valuable. In these cases the first intimation of delirium should be met by sufficient chloral.

Unfortunately, many cases will die, no matter what treatment is used. It is astonishing how rapidly some of these cases, especially surgical ones, grow worse in spite of all efforts of physician or surgeon.

Shackles are a necessary evil. In the violent stage they are often indispensable, the milder substitutes, such as tying a sheet over the patient and to the bed, being altogether insufficient. In the later stages it is bad practice to use them, as they tend to keep the patient in one position and increase a tendency to hypostatic pneumonia.

A number of drugs were tried in the typhoid stage. Ergot had no effect. It was used with a mistaken idea as to the pathology. Digitalis seemed of some value, but did not accomplish much. Whisky was used without very satisfactory results, a much better heart stimulant being found in strychnine. Some clinicians use whisky quite freely throughout the disease. I am inclined to doubt the propriety of this. Strychnine is a most valuable drug in the typhoid stage, and, indeed, in every stage of the disease. It should be used very freely.

Patients in the typhoid stage should not be kept in one position. Possibly something might be accomplished in some cases by getting the patients out of bed occasionally. This, of course, should be done carefully.

The constant watching required through the many weeks that these cases often last, is very exhausting to both physician and attendants, and is too liable to result in carelessness. Perhaps the greatest difficulty in treating delirium tremens is to persuade the attendants that the patients are really human beings, suffering from a disease.

DELIRIUM TREMENS.

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By delirium tremens we mean a peculiar condition of the nervous system produced by the use of alcohol, and, perhaps, by its too sudden abandonment. I would not, however, confine the evils of the effects of alcohol in surgical cases merely to this disease. You all, I think, must notice as you go on through hospital practice and sights that the patients who do not drink do a great deal better than those who do, in every form of accident and injury. The calmness of body and mind is with the temperate. The resistance to shock is with the temperate. The ability to respond to stimulants promptly is with the temperate, for the intemperate have already used up their powers of vital resistance; they have become accustomed to the overuse of stimulants, and they do not respond readily to them, and you do not get the benefit from stimulants which you expect. An illustration of this is seen in etherization; as we said before, it takes a great quantity of ether, and laborious and excitable and protracted etherization, to overcome the drunkard, and make him go to sleep; whereas the patient who is temperate, as a rule, takes it calmly, succumbs to it easily, and recovers promptly. There can be no doubt, I think, that the continuous use of alcohol has a deleterious effect on the tissues, hardens them, thickens them, prevents absorption as readily, dilates the veins, leads to a slow and labored circulation; in that way delays absorption, and, moreover, produces finally some changes in the brain, which in the end are structural. All these things count against the patient when he is suddenly brought to meet the strain of a severe accident or a severe operation.

Delirium tremens, applied as a name to a disease, indi-

cates of course two marked conditions which are the characteristics of it; one is the temporary insanity, and the other is tremor. I should add to these, I think, a third characteristic, which is more marked in this affection than in any other single disease, and that is sleeplessness or vigilance. It is true that we see this more or less in other affections; but we always see it in the patient who has delirium tremens. A delirium, then, accompanied with tremor and with sleeplessness, expresses pretty nearly the description of a case of this kind.

There seem to be two varieties of it quite different from each other. One is the case in which the patient is very full of alcohol, and has not eliminated it from the system; and the other is the case in which he has been accustomed to the stimulation of alcohol for a long while, and has it suddenly withheld from him and misses its support. Perhaps we had better call the cases in the first class cases of pure alcoholism. In this class the patient is loaded with the results of the execretory products of alcohol which are not eliminated. His secretions are checked; his head is confused; his pulse is rapid; his skin is red and hot; his eyes are usually inflamed; his mind is irritable, somewhat delirious. He also is sleepless, maniacal. He easily passes to another state wherein alcoholism terminates in positive convulsions; and they are a well-known occurrence — not very frequent, but yet they do occur; are distinctly epileptiform in character and quite severe. On the other hand, the patient who is suffering from the want of alcohol, from true delirium tremens, is pale and subdued; has a weak, soft pulse, and a creamy, moist tongue. He is delirious; but he is quiet and civil, as a rule. His delirium is entirely that of fear; and all the efforts which he may make, which may result in injuring himself or in injuring others, are not apparently from any spirit of ugliness or homicidal mania, but to escape from the imaginary peril which he sees about him and wishes to avoid. The patient with true alcoholism gets over that condition in twelve hours, perhaps, and then passes on to the

second stage of delirium tremens. On the other hand, very many patients are brought into the hospital perfectly sober. It is difficult perhaps to extract from them the admission at first that they drink at all. They show for the first day perhaps no change from other patients; but soon after confinement in bed with a fracture, or with a painful broken rib, or with a wound — soon after confinement, within a few hours or a day — they begin to show the restlessness, the sleeplessness, and the tremor of true delirium tremens. These two classes of cases then would seem to be quite distinct; and although the final treatment of the two is practically the same, yet the alcoholism requires a different treatment while it lasts during its brief period, from that of the patient who begins with a delirium tremens without any alcohol in the system. In the patient with delirium tremens the tremor is most marked usually in the tongue and hands. He rarely can hold the hands steady, almost never can protrude the tongue without constant tremor; and this is quite characteristic of this nervous affection.

This is not to be confounded with the patient who has a tremor from debility in advanced fever. Take, for instance, the typhoidal state, in which we have jactitation, subsultus of the tendons, shaking of the fingers, quivering of the muscles of the face, and the dry, parched tongue and lips which the patient cannot control. In this typhoidal condition, perhaps, the patient is unable to protrude the tongue even though he tries to do so in answer to your request. On the other hand, the peculiarity of the patient with delirium tremens is that he is excessively anxious to do whatever he is asked to do by the doctor, with the idea that it will be a benefit to him; and being already in a state of fear, he is extremely submissive and overdoes everything that you ask him to do. If you ask him if he can sit up, he bounds up in bed. If you ask him to put out his tongue, he puts it out with great violence, and holds it out a long while. While he is thus afraid that he is going to die, his mind is in such a changeable state that no impression lasts longer than a few seconds;

and even though you may congratulate yourself that you have made some impression upon him, you cannot have the slightest confidence that it will last with him after you have left him. In this condition of pure delirium tremens his fears are so great that he forgets pain, and will abuse a broken limb, or a wounded surface in a way that no patient could bear in any other nervous condition. It is repeatedly the case that patients with delirium tremens, who are not properly watched, will tear off the splints and get out of bed, tear off dressings, etc. They are totally insensible, apparently, to the feeling of pain, while the stronger impression is on them of some reason why they should escape. The reason why they wish to escape is because they see around them in imagination various distressing visions which frighten them to a terrible degree. All sorts of phantasms and illusions pursue them, and some of their delirious fancies are extremely absurd, of course. In this condition of mind they can hardly be held to be accountable for what they do; and they are really temporarily insane, and may commit crime without any desire to commit crime, but only to escape from imaginary dangers. The patient with delirium tremens, for example, will get out of bed and try to escape from the room or the ward of a hospital, and if opposed, will not hesitate to inflict homicidal violence on the person who meets him if he has the strength to do it. In that way, you see, occasionally murder and crimes are committed in the delirium-tremens condition; and it must be strictly borne in mind that these people are in a state of absolute mania, and not safe to be trusted for a moment. Their promises are worth nothing. They are extremely dangerous to handle without assistance.

If an accident of any kind happens to a person who is habitually taking alcohol, which suspends suddenly the ability to take it, as, for example, an accident which causes them to have nausea, then delirium tremens frequently supervenes. It is not necessary that there should be a surgical accident either; for it is a well known fact that

delirium tremens is extremely common on the immigrant ships a day or two after they leave port, in consequence of sea-sickness interrupting the ability of the drunkards to take their customary stimulants. It is extremely common; and occasionally such patients have to be confined; and occasionally they commit suicide by jumping overboard. So that anything that suddenly shakes the nerves and interrupts the action of the stomach brings on this condition.

It is a very curious fact that in some drinkers the delirium-tremens condition does not come on suddenly, but waits till a day or so after the occurrence of the accident before it begins to show itself.

Pathology.—The pathology of this affection is almost nothing. It is apparently a functional disease, and it does not terminate fatally very often. When it does terminate fatally, it is usually accompanied by great serosity of the brain, what is called in some books œdema of the brain; in the older books it was called by the older writers by the very impressive term of a wet brain. In this condition the autopsy shows the sinuses loaded with venous blood, the ventricles and the spaces about the arachnoid cavity loaded with serum which extends down into the spinal canal. The mode of death is by gradual coma coming on exactly like what is called sometimes a serous apoplexy; coming on gradually, sleep deepening into stupor, inability to be roused, and finally resulting in death. Other changes may be found in the organs due to the habitual use of alcohol, but other changes coming from delirium tremens do not seem to exist; so that practically it is a functional rather than a structural affection; an affection of worn-out and exhausted nervous energy; and the pathology points to the treatment, which should always be of a soothing, supporting, and quieting nature.

Now, obviously, it will not do at all to consider the patient with alcoholism in the same category, as regards immediate treatment, as the patient with delirium tremens. The patient with alcoholism is already loaded with the effete

results of this indulgence; and the sooner it can be eliminated from his system the better for him. With such a patient, then, sometimes an emetic is of use; always a mercurial cathartic is of use; and sometimes something to promote the secretion of the kidneys, or of the skin. After the alimentary canal and other emunctories have been thoroughly cleared out, then is the time to begin to apply the treatment we should give to real delirium tremens.

The only cure for this affection of exhausted nerves is sleep. This is a panacea in this affection. It is a cure, if it is long enough and if it continues uninterruptedly. To procure sleep has always been one of the great indications in the treatment of this affection, and the one thing most difficult to obtain. In almost all other affections we have in opium a most powerful remedy to procure sleep. Unfortunately there are two reasons why it is not advisable to use opium in delirium tremens; one is that it is totally inoperative unless enormous amounts are given. The ordinary dose only excites the patient. Where a grain of opium would do in one case, a good many grains are necessary to subdue the mania of the patient in delirium tremens. In addition to this, it seems to exert an unfortunate effect upon the brain; and it has been pretty well proved by investigations that narcotism produced successfully with opium has some dangers in delirium tremens; that it is liable to result in lasting coma, and to carry the patient off into that serous condition of the brain which terminates finally in death. Chloral also is objectionable to a certain degree on account of its depressing effects. We know that chloral is quite a powerful hypnotic. We also know that it has a marked effect in depressing the action of the heart, and that it is rather accumulative in its action; and if several successive doses are given the combined effect may last longer and be greater than we had expected. As a depressant to the nervous system and the heart, it is somewhat dangerous; not that it should be set aside, but be used with great caution. One might think that ether would offer the best possible remedy we could use in

delirium tremens. The patient, however, succumbs to ether with difficulty, but finally goes to sleep. His muscles are relaxed; he bursts into a drenching sweat, and sleeps for a while with good effect; but so far as I have observed he always wakes with the delirium unabated; and it can be used with success, apparently, only as a temporary expedient. As a temporary expedient it is extremely valuable. In the patient with delirium tremens who is strong and violent, and suddenly meets with a severe accident, has a bad fracture, for instance, and has got to be transported, it may happen that etherization will be the best way to do it. He may be etherized fifteen to thirty minutes until he can be transported, perhaps put to bed, perhaps have his fracture treated, his limb dressed; but as a direct remedy, a curative agent, ether does not seem to have had a marked success. Chloroform, I should suppose, would quiet the patient quickly, but be a good deal more dangerous in this condition than in the ordinary condition, and be liable in some unexpected cases to kill the patient

In order to procure sleep, as far as drugs are concerned, we have to resort to the milder class; and often they are quite as effectual as the stronger. The most efficient, and the most innocent of all that are efficient, is the bromide of potash. They may be given safely in large doses, at intervals of four to six hours, for quite a while; and although if given a long while it finally affects the brain, reducing its circulation so far that the patient becomes temporarily demented, as I have seen in a number of cases, yet for the few days that perhaps we have to use it for delirium tremens, it almost never does any harm. It frequently is successful in procuring sleep; and it is apparently an innocent agent. Now much milder agents are sometimes successful, as, for instance, the tincture of hops (which is a good bitter), or valerian, or the preparations made from valerian, especially the combination of valerian and ammonia known as valerianate of ammonia, which is a good stimulant and good quieting agent, and apparently perfectly harmless.

Certain agents that have a stimulating quality are also sometimes very useful, especially the compound spirits of ether, called otherwise Hoffman's anodyne; this used to be called the heavy oil of wine, is a stimulant and also a sedative agent. It is a good agent to use in delirium tremens. Probably paraldehyde would come in the same class, to a certain degree. Sulphonal is uncertain, extremely slow. Its therapeutic effects do not come on apparently for several hours after administration, and then last a good while. It is to a certain degree a depressant to the heart; and it is to be classed, I should think, in the treatment of this disease, somewhat in the same category as chloral.

Stronger agents were sometimes used with great success, but they became so dangerous that I think they have become pretty much abandoned. I would instance, as an example, digitalis. That used to be very largely given, twenty years ago, in delirium tremens; and the doses were enormous, sometimes one drahm of the tincture, sometime that amount in two successive doses. This frequently quieted down the circulation to such a degree that the patient went to sleep; but sometimes fatal cases arose from its use, and it was then abandoned for safer agents.

There are some things which sometimes will put the patient to sleep merely by quieting the nervous disturbance which arises from the condition of the stomach. Of these capsicum is extremely valuable. It is appalling to see the ease and satisfaction with which the drunkard will take a large bolus of red pepper. He sometimes takes ten grains of this. It is easily administered in a crumb of bread. That sometimes quiets all the aching and distress at the epigastrium, and in that way tends to take the place of alcohol, and so secondarily to induce quiet and sleep.

Should alcohol ever be given? That is rather an important point. Many authorities think it should; some think it should not. I must say, for my own part, that I think a limited amount of alcohol, in the form of malt liquors, is useful and justifiable in treating these cases. You must bear in

mind when you get one of these bad cases that in almost every case the patient has been a spirit drinker, accustomed to liquors which contain from forty per cent. to fifty per cent. of alcohol; and he is accustomed to carry large amounts. The percentage of alcohol in malt liquors is so small that he may drink a large quantity of them without approaching the intoxicating dose to which he was accustomed; and a pint or quart of ale is nothing, almost, to the habitual drunkard. The advantage of giving a certain amount of stimulant in this form is that it contains the bitter and narcotic effect of hops, which is very grateful to the stomach, and the nutritive effect of the malt, that is, it combines a tonic with a certain amount of nutrition and a moderate amount of alcohol. Many cases of delirium tremens do extremely well on being allowed a moderate amount of strong beer or ale; and they get along without much other drugging.

I know that in these cases the care of the patient is so wearing, and the anxiety, when the case is prolonged to the second or third night without sleep, is so great, that one is tempted to try other forms of drugs, and to administer them to the patient in large quantities to induce sleep. I do not think it is good practice. I think it defeats its end, and sometimes leads to bad results. I should rather pin my faith on mild drugs, and trust to food and gentle stimulation in the treatment of this affection.

This leads to another point: How much is it best, and in what way is it best, to restrain the patient? To tie them down and put them in the strait-jacket, or to fasten the ankles and wrists and put a sheet across the chest, as you sometimes see, is not in itself beneficial. I believe it is directly injurious; and if it can be dispensed with, it had better be. You can imagine, for instance, the patient almost terrified to death by the visions that he sees around him, tied down. He struggles frantically, exhausts himself, throws himself into a state of great prostration, becomes more and more alarmed. He cannot sleep certainly in that

condition, and he probably receives more injury than benefit from it. At the same time, of course, in large institutions where a good many of these cases have to be taken care of, it is absolutely indispensable sometimes that some mode of confinement should be used; only I would enter a protest against its being used indiscriminately, or any more than is absolutely necessary. Take the case in which we can have our own way, in which the patient can be kept in a private room or house by himself, and have plenty of attendants; then it is never necessary to tie the patient, because the best form of physical restraint is by the nurses holding him temporarily and then relaxing, amusing him, talking with him, trying to win his confidence. In that way he does not exhaust himself, is not so alarmed, and gets well a great deal quicker.

Another point which I think is very important is that these patients should not be left alone, and should not be shut up in the dark. Nothing terrifies them so much. They are very fond of society, while in this state of mind. They seek intercourse with everybody about them. They are the better for it. Of course, if at any time they show the slightest disposition to go to sleep, then is the time to quiet things down, exclude the light, and while carefully watched, allow them to sleep as long as they will, not being afraid that they will sleep too long, as a rule. The presence of people with them, cheerful conversation, amusing them to a slight degree, letting them feel they are not deserted, assuring them they will get well, is of great importance in this nervous condition.

Now the next most important point, perhaps the most important of all, is food, nutrition. If they can take nutriment, if the stomach will tolerate food, they almost always get well, and they almost always go to sleep after they have taken food. The trouble is, in the early stages, that the stomach is often extremely irritable and food is not retained. It is in this condition, I think, that minute doses of calomel are sometimes extremely useful, and also the use of carbonic

acid gas in all forms of effervescing waters. Ice may be freely given and minute doses of calomel; and then gradually the patient can be tried with lime-water and milk, or some concentrated liquid food, etc. If the stomach will retain food, the patient should be fed on liquids at short intervals, precisely as we should treat a very sick patient in an exhausting disease. It is a condition of exhaustion, wants food, plenty of it, administered often in small quantities and in the liquid form. If you can once get the stomach to tolerate food, and afterwards give the patient something like a little malt liquor, frequently you can get along without any drug of a narcotic kind; and if that can be done, it is of great advantage.

I said that sleep was the panacea. It is in the majority of cases if it is lasting enough. Unfortunately, there is a certain percentage of cases where the sleep is not satisfactory. In the typical case the patient wears himself out in from twenty-four to thirty-six hours, and finally drops to sleep, and is thoroughly and dead asleep, and sleeps eight, twelve, or fourteen hours, something of that kind, and wakes somewhat exhausted, but perfectly calm and conscious; then the disease does not come back. The thing is over, and he needs only careful nursing and feeding to get along. On the other hand, in the exceptional class of cases, the patient sleeps a shorter interval, and wakes delirious; and those cases are always of extremely bad prognosis. They terminate in two ways; either these short naps are ineffectual, and with recurring delirium, until finally the patient becomes exhausted, and passes into the condition of serous effusion of the head, and dies; or else, in another class of cases, and a pretty large one, the delirium keeps recurring, and he passes on to permanent insanity. I do not think it is perhaps realized how often we see cases at the hospital which after a week of struggling of this kind cease their tremor, perhaps cease a good deal the morbid vigilance, but remain permanently in a state of mania, and are practically insane. Eventually, perhaps, they have to be removed to in-

sane asylums, and pass through some of the stages and treatment of ordinary mania, with various results. This would seem especially to be the case with powerful men of athletic habit, accustomed to live out-of-doors, and commit great excesses; at any rate, that is the class of cases I have in mind.

Sleep when it comes and lasts, and the patient wakes sane and clear, is a cure. When it come interruptedly, and the patient wakes delirious, the prognosis is extremely unfavorable.

You must see, of course, that with a patient in this condition, it is extremely difficult to treat a fracture, or to bring about a successful result in a head injury. It is in injuries of the extremities and in injuries of the head that delirium tremens is so disastrous, either in producing bad results to the injuries themselves, or in finally killing the patient. Delirium tremens, as you may imagine, is the worst possible complication of a scalp wound, whether with or without a fracture of the skull. The patient's brain is in a morbid state of excitement for a good many consecutive hours. He is liable, of course, to set up a meningitis in consequence of his injuries; and his chances of doing this are very much increased by the delirium tremens which accompanies many of these cases. In injuries of the extremities, especially of the lower extremities, it is almost impossible, in fractures, to keep the parts still while the patient is in a state of delirium tremens. I have sometimes found that they did best by being slung up temporarily in the Nathan Smith anterior splint, in which the leg is suspended on a wire frame, and held up over a pulley, so that it hangs. In this way a fracture of the tibia or femur can be held relatively quiet, and the patient can move about all he likes without doing much injury to the leg, because the leg is kicking about in the air, and not reaching any other object. With this apparatus, the patient can get out of bed, sit on a chair, and get into bed without disturbing the fracture.

What could be better than instantly securing the patient, and doing the leg up in an immovable plaster cast? Any

amount of apparatus that we can safely put on to the living tissues of the limb will not be sufficient to control the quivering and twitching of the long muscles, which the patient can keep up inside of the cast, so that it sometimes happens that upon removing the cast after a week or so, we find a compound fracture where originally there was a simple one. It is perhaps safer that the limb be put up in the Nathan Smith splint, and the patient watched a day or two until the delirium has subsided; or if the plaster cast is used, it is safer that it should be in the form of a high trough, having the small surface of the front of the bones exposed, and thus the condition of the fracture can be constantly seen and watched. It may seem almost incredible, but I have known of instances in which the patient removed the plaster cast from the leg when not thoroughly watched. To be sure, he had very little of his finger-nails left in the morning. Also more remarkable, this patient finally got a good leg, although he had a fracture in the middle of the femur, and we expected almost anything to result from the way in which he tossed about for a number of days.

Other agents produce a certain sort of delirium tremens; for instance, tobacco, if used in very great excess; tea notably. The excessive tea-drinker has a tremor and a great nervous excitation or wakefulness, does not have the delirium, but the other phenomena of delirium tremens, and he has to be treated in the same way.

The treatment of the convulsions which we occasionally see in the drunkard is pretty difficult. I do not know that we can do much except to try as rapidly as possible to get the alcohol out of the system. These convulsions are occasionally fatal. I have seen several result fatally after a day or so of continually recurring convulsions following the condition of pure alcoholism. The treatment, of course, should be to eliminate the alcohol, and to soothe the patient if we can.

Three or four other agents I will speak of for a moment, which are extremely useful with the drunkard in averting an

attack. For instance, a person comes to you, and says plainly: "I have had these attacks before, and I feel one coming on. I am getting shaky, cannot sleep, am beginning to think I see visions, etc., etc." What shall be done? Of course, he wishes and you wish, that he should abandon the habit of taking alcohol, and you want to carry him through this threatening attack, and compose his nerves. In that case there are some other agents that seem to do a great deal of good. Most important of these, I think, are the preparations of coca, given in small doses, especially the coca wine, which is extremely useful in counteracting the excitability produced by this state of slight delirum tremens. Camphor is also another old-fashioned remedy, sometimes very grateful to the patient, and very soothing. Asafœtida, a much-disused agent, but still, I think, an extremely valuable one, may be given in pills well coated over so that it is tasteless and does not nauseate the patient. It should be given largely to be of any effect — ten, twenty to thirty grains; and its advantage is that it is quieting, disposes to sleep. It is also to a very marked degree stimulating, and it is also somewhat relaxing to the bowels. These three qualities render it extremely valuable in slight nervous affections resulting from incipient delirium tremens or alcoholism. Hyoscyamus also seems to have a very good effect sometimes in quieting the patient and making up for the loss of sleep and the nervousness that he feels. These patients also may sometimes be given coffee and tea, if they wish it, to take the place of other stimulants. Once in a while some effect may be got from counter-irritation applied over the pit of the stomach, which sometimes affords great relief in this nervous state.

We would say then, in short, to sum the matter up, that if you have a patient who is in this incipient stage, you try these simple remedies and take care of him. If you have a patient who has been on a tremendous debauch, and is still full of alcohol, the treatment of delirium tremens will not be of the slightest avail until you have eliminated the alcohol

from the system, and that can be done most speedily by simple cathartics, by producing sweating, stimulating the kidneys, and allowing a little time to elapse before you apply the other treatment. When you meet the real case of delirium tremens, it is best conquered by gentle and sustaining treatment, rather than by any violent treatment, personal restraint instead of mechanical restraint, plenty of food if it can be taken; if liquor is given, in the form of malt liquor; if narcotics are used, the mildest possible agents to be tried first. If the patient sleeps, and has a good sleep and wakes once sane, he is certainly cured. If he has an imperfect sleep and wakes delirious, he may get another and better one, and wake up sane; but he is extremely liable to get a succession of short naps, and wake with a delirium that is liable to terminate in acute mania.

It is a little difficult, until you have seen a good many of these cases, to recognize this condition of delirium tremens when it is first coming on. Its incipient stages, however, are quite marked to one who has seen them. These patients usually begin by being very talkative and extremely communicative with regard to their past history and the nature of the accident. They seek conversation with every one about them. They are a little too wakeful and excitable. They have rather a too wideawake look about the face. They are too alert all the time. Accompanying this there is very frequently a little tremor to be detected, until at last delirium tremens is developed with great rapidity and positiveness, and there can be no doubt about the case. Of course, if these early stages are detected and treated, we have a much better chance of warding off the subsequent affection, so to speak, than if they were overlooked; hence, I think it is a good practice in treating all hospital cases, where we have to deal with such an immense amount of these results of drunkenness, to always consider that point when you look at a patient brought in with a broken leg, for instance. He has got a broken leg; what else? Is he a drunkard or not? It is of no use to ask him. You must judge by look-

ing at him; and in many cases you can learn to distinguish the person who drinks from the one who does not drink. If you are in doubt you had better give him the benefit of the doubt, and watch him closely. Administer some gentle solution — a mercurial cathartic; perhaps early in the case, a mild stimulant, or tonic compound like beer; or the early administration of a sedative of simple nature the first night you see him. In this way you may sometimes avert or postpone, I believe, the severe cases, and lead them to better results.

The law holds the drunkard accountable for anything he does. It is a little in dispute, I think. A good deal is to be said on both sides; and I think a good deal is said on both sides by judges in court as to how far the patient actually crazy with delirium tremens should be considered an accountable being. We know how far the point is stretched in endeavoring to secure the acquittal of criminals, that they may have inherited insanity, or been insane, or had a temporary insane impulse, or something of that kind, and that sometimes this point is carried so far as to be abused. If any person is to be allowed any privilege or loophole to escape from the consequences of crime, it seems to me it should be allowed also to the case of delirium tremens. It would not do to excuse the man who is clearly drunk from the consequences of the crime he may have committed, because he voluntarily put himself in the condition; but if he has passed into the state of delirium tremens, and then committed a homicide, not from malice aforethought, but only because he was afraid something was about to happen to him, I think he ought to have the benefit of the doubt, as being temporarily under the dominion of an insane impulse. I would strongly impress upon your minds that you cannot trust in the slightest degree patients with delirium tremens. You cannot believe them to the slightest degree, and you should have them closely watched. By way of illustration I may cite one case which occurred in the City Hospital, in Ward K, which is on the ground floor, and which at that

time did not have any netting or bar at the windows, and which happened to be used at that time for females. Going through one morning I found an old drunken woman, well advanced in delirium tremens, who attempted to cut her throat. She did not succeed. She only made a gash through the flesh, which had been sewed up, and that was doing perfectly well. The nurse said to me: "I wish you would control her, because she keeps pulling off the bandage, and I am afraid it will start the bleeding, etc." So I made some remarks to her, which I thought produced a very fine effect. I asked, "Do you want to get well?" "Oh, yes," she answered. "Well, if you want to get well, you must not touch these bandages. You will die if you touch them." "I will never touch them." She sank back quietly, and I walked down the corridor. Hearing a commotion, I looked around, and to my astonishment this patient had got out of bed, pulled off the bandages, and jumped out of the window. You may produce an impression one second; it is forgotten the next second; and a crime or a suicide may be committed the moment your back is turned.

Dr. Quimby, in a recent lecture, remarks: — "Nothing can be more stupid and fatally inconsistent than the theory held by many medical men, viz., that every one is formed with equal powers of resistance, and capacity of discrimination in the use and abuse of alcohol. Hence, every one should be held equally responsible for all violations of law, both human and divine. This is flatly contradicted by all facts and experience, and is not true. Such men assert dogmatically that no one need drink unless he chooses to, and all can stop if they but will to, and that alcohol is a food and brings some unknown power to the system.

This assumes a degree of knowledge that is not in the possession of any human being. Such theorists are not familiar with modern physiology or the limitations of science, and most unfortunately are blind leaders of the blind.

Abstracts and Reviews.

THE RELATION OF THE ABUSE OF ALCOHOL TO MENTAL DISEASES.

The abuse of alcohol must be considered, not only as a cause of insanity, but as a symptom or effect of insanity. There are abundant statistics to show that the habit of intemperance is often inherited. In all probability it is not a craving for alcohol that characterizes this inheritance, but a neurosis, the characteristic symptom of which is a want of inhibition or power of self-control. It will be convenient to consider the action of alcohol as a cause of insanity under the following headings: (1) Alcoholic abuse acting directly as a cause of insanity. In the cases under this heading, the mental arrangement is due, in a primary attack entirely, and in subsequent attacks, principally to the toxic action of alcohol on the nerve cells. It may be mentioned that such toxic action is in some cases due to the presence of propyl, butyl, and amyl alcohol as impurities. In such cases, probably, the nerve cells are hereditarily predisposed to the action of alcohol. In the first attack the derangement is purely functional and the patient may recover completely, but is more than ever predisposed to the toxic action of alcohol. In the second and subsequent attacks, the mental derangement is principally functional; but the more numerous the attacks, the more tendency is there to organic changes taking place in the cerebro-spinal nerve tissue, until finally the patient does not recover, but develops symptoms characteristic of chronic alcoholism, which will be referred to under the next heading. In this class of cases, the mania is liable to be of a type resembling epileptic fever, during which suicidal acts may be committed either purposeless in character or as a result of delusions or hallucinations. (2) Alcoholic abuse acting indirectly through its action on the tissues and organs

of the body. Prolonged, excessive indulgence in alcohol produces tissue changes which consist chiefly in a considerable increase of connective tissue elements of the brain cortex, together with degeneration of nerve cells, more particularly those of the deep layers. The attacks are generally gradual in their onset, but occasionally are sudden. They are characterized by suspicions, hallucinations, and delusions, which at first are usually intermittent and varying, while at other times they are fixed. So long as they are intermittent, the prognosis for recovery is good. The organic diseases are generally cirrhosis of different viscera which produce a condition of melancholia. (3) Alcoholic abuse acting in conjunction with moral or physical causes. Strictly speaking, those two causes stand to one another in the relation of cause to effect; they, however, act and react on one another to so great an extent that the effects of both are combined in the causation of the ultimate result. A common example is where business misfortunes lead to alcoholism, or where alcoholic habits lead to failure in business, in both of which cases we have a mental depression associated with the abuse of alcohol. In cases where mental depression has led to alcoholism, the type of insanity is generally delusional mania, but where the alcoholic habits have led to mental depression, the symptoms are usually those of melancholia. (4) Alcoholic abuse acting in association with certain physical causes: (*a*) sunstroke, (*b*) injury to the head. While many patients completely recover from their injuries, there more frequently are more or less nervous symptoms. In both of the above lesions, one of the most common results is an increased susceptibility to alcohol, and a change in the manner in which the emotions are affected in the early stages of intoxication.—*Dr. R. H. Noott, in Lancet.*

Dr. Bridge says: "I am firmly convinced that alcohol actually renders the tissues less liable to resist the spread of the morbid process and less able to withstand the poisonous

action of the toxine of scarlet fever. Alcohol itself is the toxine of yeast fungus, and seems to stimulate the multiplication of at least some other bacilli. But, whatever the explanation, the fact remains that my experience of non-alcoholic treatment has been hitherto entirely satisfactory. — *Medical Pioneer.*

CASE OF PARALDEHYDE HABIT. By T. H. Stucky, M.D., Louisville, Ky.

I would like to report a case of paraldehyde habit. The latter part of April I was called to see a young woman twenty-one years of age, who had previously been addicted to the use of morphine. She had been in Illinois attending the Keeley Institute, and had been relieved partially. I found her very restless and nervous, and prescribed valerian and assafœtida, but she was unable to take it. I then ordered three ounces of elix. paraldehyde, saw her the next day, when she seemed much better, and told her if she had any further trouble to let me know. I heard nothing more in regard to the case until, I think, the latter part of September, when her husband came to me and asked if his wife could not stop taking that stuff; that she had had the prescription doubled in May and filled ten times — which was sixty ounces; in June had it filled sixteen times — which was ninety-six ounces; in July filled twenty times — making one hundred and twenty ounces; in August filled twenty-three times — one hundred and thirty-eight ounces; September filled thirty times — one hundred and eighty ounces.

I went to see the patient and she stated that she drank the medicine from the bottle whenever she began to feel a little faint or nervous. I was surprised to learn that it still produced sleep and gave her decided benefit apparently, but the most interesting feature was that I could not see it affected the heart to any marked degree. It produced absolutely no alarming symptoms, and her appearance was similar to what we see in a person addicted to strong drink —

she resembled an individual who had been on a protracted spree. The paraldehyde was withdrawn the first of October entirely. She was placed in bed and watched carefully by a competent nurse, and I gave her valerian and strychnine. She seems to suffer just as one who is recovering from delirium tremens.

This patient consumed an average of six ounces of paraldehyde a day, or one hundred and eighty ounces during the month. I have never seen report of a case of this character and it struck me as being very unusual.— *Medical and Surgical Reporter.*

CLIMACTERIC INEBRIETY.

Dr. Caldwell, in the Virginia *Medical Monthly*, writes as follows:

"But perhaps the most common, and I really think the most terrible form of mental disease which is developed at the climacteric, is a tendency to the abuse of alcohol. Here let me say, in defence of woman, and in opposition to much clap-trap which it has been of late the fashion to write about their drinking, that after a considerable experience of women who have given themselves up to the habit of intemperance, I have never yet had one as a patient in whom there was not some strong inducement to the indulgence. Women are always secret drinkers, in this differing greatly from men; for when a women does give way to intemperance, she knows how much more she has to lose than a man has, and how much more misery she will bring on others. The cause will generally be found to exist in some physical suffering, or in some mental distress, from which she seeks relief, or in a form of climacteric insanity. I have cured a drunken woman of her habit by a pessary for retroflection. I have known many driven to the use of an alcohol anæsthetic by the neglect or infidelity of their husbands; but by far the larger number of these unfortunates have adopted the habit late in life as a relief from their climacteric discomfort.

"These are cases of insanity, and it would be a wise law which would enable us to place them in seclusion till the time of their trial is over. I do not believe that women ever take to drink from the mere love of it, or from convivial indulgence, as men do."

REPUTED "CURES" FOR INEBRIETY.

We have repeatedly drawn attention to the persistent efforts by the representative of proprietary and undisclosed alleged "cures" for inebriety to push their wares in non-medical temperance, religious, and philanthropic circles. The favorite hunting-ground of the proprietors of all such specifics has ever been these circles, in which intelligent criticism by persons in a position — from professional training — accurately to weigh the character of the psychical phenomena presented before them cannot reasonably be looked for. Whether the alleged panacea be a patent medicament for the cure of rheumatism, or a secret process for the cure of drunkenness matters not; it is all the same. We have known of men of wealth and culture publicly testify their belief in the perfect efficacy of a once popular, but now discredited, patent external application for the cure of rheumatism of any chronicity. Accordingly, we read in the pages of a lay contemporary, of committees, composed of clergymen and non-medical persons, seeing inveterate drunkards "cured" before their eyes, practically *coram populo*, of 20-year-old "crave for intoxicants" being extinguished by processes and preparations of various forms.

Take an instance. A female drunkard, after taking a certain remedy for so many days, in a public assembly the other day, when asked whether "she was restored to the condition in which she was when in her teens," replied: "Yes; I have no desire for drink," whereupon a member of the investigating committee oracularly remarked, "That is perfectly satisfactory. It is a complete cure." Such a test is, to the experienced and skilled student of inebriety, value-

less. We have heard similar declarations as positively and publicly made, thirty years ago, by ardent teetotalers, who, in the intensity of their enthusiasm believed that a sudden and perfect cure of the drink crave had been effected by purely moral and religious means. Times without number special teetotal mission operations have produced as wonderful and more numerous apparently quite successful cures. Beside Father Mathew's hundreds of thousands of seeming immediate cures, these modern results shrink into comparative insignificance. In those days the effort was purely disinterested — a labor of love; now the credit is attributed to a special secret potion or application, and avowedly for gain.

Many medical men who have made the scientific treatment of the disease of inebriety a special study, and all genuine homes, could produce as sensational testimony from inebriates under their care at a certain stage of their treatment, for inebriates desirous to be cured, whether they relapse or not, are usually most grateful and elated, and feel perfectly certain they could never taste liquor again. But the loyal practitioner of the art of healing and the judicious conductor of such an institution would scorn to take such an advantage of a phase in the mental condition (often evanescent) of the patient, while science declines to accept such phenomena as a test of permanent improvement. We gladly record that most of the leading temperance reformers have held aloof from all these sorry exhibitions, which are as little calculated to serve the cause of true temperance as would be mesmeric or hypnotic similar and more rapid "cures," which could as readily be produced in public gatherings.

At the same time nothing but good could result from an analysis and publication thereof of the various and numerous "remedies" which are alleged by their proprietors to have been nearly, if not always, successful. One curious feature is that the inebriety "cure" is reverting to its pristine form. The original modern specific was a liquid medical preparation. That was succeeded by hypodermic injections with or

without the physic to be swallowed. The latest "cures" are simply fluids to be taken by the mouth.—*British Medical Journal.*

DEGENERATION AND ORGANIC DEFECTS.

Dr. Tomlinson of St. Pauls, in a recent discussion, made the following remarks, which are especially applicable to cases of inebriety:

"I think care should be taken to state definitely what we mean by defective and degenerative, as there seems to be a tendency to use the terms interchangeably. A defective individual I understand to be one who, either as the result of hereditary or congenital imperfection of structure of constitution, or as the result of acquired imperfection resulting from causes operative during the first seven years of life and producing arrest or irregularity of development, is handicapped in proportion to the degree and character of the defect.

"If this imperfection exists in the nervous system it is manifested by instability and renders the individual liable to develop some one of the different forms of nervous disease, according to the degree and character of the defect in the general nervous system; whereas if the instability is in the cortical envelope of the brain itself, the tendency will be toward aberrant psychical functioning, and just as the nature of the manifestations of defect in the general nervous system will be influenced by the physical conditions surrounding the individual, so will the manifestations of aberrant pyschical functioning be determined by the nature of the mental environment.

"The process of degeneration is usually called primary when it takes place during the period of development and without any apparent extrinsic cause, and secondary when it follows or accompanies some gross pathological change in the general organism or the nervous system by itself.

"I think, however, that the term secondary is inapplic-

able, and that we should use the term consecutive instead, as best explaining the conditions superimposed upon the process of degeneration, as it takes place after development is complete; or at the climacteric period when symmetrical decay begins. Therefore, as a consequence, if any part is essentially weak or has been overused, its more rapid process of decay will be conspicuous as a disease process, not only by its local manifestations, but by its influence on the organism as a whole."

INEBRIETY AND CRIME.

The eyes of lawyers are beginning to open to the facts as to the relation of alcoholic drinks to crime. In the recent trial of Robertson, the New Bedford murderer, who killed his wife when drunk, Lawyer Holmes for the defense used the following significant language to the court and jury (Italics ours):

"It has been said, and I suppose it continues to be the opinion of the court in this commonwealth, that drunkenness is no excuse for crime. That is a very old doctrine, gentlemen, and one reason of the rule is said to be, because the safety of society depends on holding the drunken man responsible. Although we must agree that this is the law, I think we may well claim that *the doctrine has not secured the safety of the community*, that the safety of the community would be more secure if we held that *drunkenness did excuse from all crime*, for then society would set about to *prevent the making of drunken men.* Alas, how long will it be necessary for us to go on in this vein before the commonwealth shall realize that *punishing the drunken man brings neither remedy nor safety to the community.* . . . So long as the recollection of these facts shall remain in your mind, you can never be satisfied that here was a scene of deliberate premeditated and malicious murder — that doubt if not conviction shall cling to you that there was the unreasoning act of a drunken man. And if, when you have mitigated your ver-

dict by these just and merciful considerations, you still ask yourselves, upon whom then, shall the balance of the penalty for the death of this poor woman be visited, let your answer be found in the curse denounced of old — 'Woe unto him that giveth his neighbor drink, that putteth the bottle to him and maketh him drunken also.'" — *New England Home.*

MODERATE DRUNKARDS.

Dr. Rae, editor of *Temperance Record*, gives the following clear statement of some of the facts that are denied so sharply.

"We are indebted for the phrase 'moderate drunkard' to Mr. Josse, a naturalized Frenchman, who was at one time M. P. for Grimsby, and died last summer. When occasion required him to explain that he was not a total abstainer, he did so by saying that he was a 'moderate drunkard'; and, while 'superior' persons smiled at the ingenuous Frenchman applying to himself the name of drunkard, there is no doubt he was right. The fuller and more correct knowledge of the effects of alcohol on the tissues of body and brain, which every day's investigation is putting us in possession of, is proving to the world that the phrase 'moderate drunkard' more correctly expresses the condition of everyone who takes alcohol, than the more euphonious 'moderate drinker,' which is preferred because it claims to be not only compatible with, but actually indicative of, respectability. It is proved beyond doubt that the smallest quantity of alcohol causes a disturbance in the system: that the disturbance increases according to the quantity imbibed, and that there is no point in the process of drinking alcohol at which a line can be drawn, and it can be said, 'Up to this point mind and body have not been injuriously affected, the functions of neither have been impaired, but the next drop makes the sober man drunk.' No; drunkenness, which simply means the disturbance of the system through the drinking of alcohol, begins with the

first drop imbibed, and develops, according to the constitution and temperament of the drinker, physical, mental, and moral aberrations of which the victims may, and generally do, remain unconscious, although these aberrations may be attracting the attention of strangers, and deeply grieving the hearts of friends. And thus it comes to pass that persons who are called 'perfectly sober,' say and do things they would neither say nor do if they had not been having some drink. Instead of being spoken of as 'perfectly sober,' such persons should be spoken of as 'partially drunk,' but this, their real condition, is concealed rather than expressed by the phrase they use in describing themselves, that of 'moderate drinkers.'

"We live in an age when nobody defends drunkenness. The representatives of the liquor interest are even more emphatic than the temperance party in denouncing drunkenness; and they do it with such an air of innocence as would almost persuade one to believe that the drunkard wrongs them by consuming so much of their liquor and adding so much to their profits. They repudiate all responsibility for the drunkenness that the drinking of their liquor produces. They take their stand on the platform occupied by the persons who drink so as to become only partially drunk, and claim these 'moderate drunkards' as the persons for whom they cater, because they are thought to do themselves and the drink interest credit by the moderation of their bibulousness. The liquor interests are quite willing, yea, clamorous, that the temperance party should turn their attention, and confine their attention to drunkards, and by some means get rid of them, so that the way may be kept clear for the drinkers who have not yet become drunkards, going on drinking with as little as possible of the fear of consequences before their eyes. Drunkenness, meaning thereby the condition that is universally acknowledged as such, being thus utterly discredited, it is most important that the evil effects of the drinking which has not yet resulted in this drunkenness should be insisted upon, until they are thoroughly understood

and their significance is grasped. And as a preliminary consideration it is very desirable that all drinkers of alcohol should bear in mind what Dr. Coley says: 'Those persons who are in the greatest moral and physical danger from alcohol are just the ones who are most ready to prescribe for themselves, and the least ready to believe that they cannot stop whenever they please.'

"The drinking of alcohol produces a disturbance in the system; and Dr. Clouston of Edinburgh says the alcohol 'affects more strongly the highest brain functions of emotion and control.' He also remarks that 'it is now generally recognized that as the moral faculties were the last to be evolved, they are commonly the first in brain disease to disappear.' The first effect that alcohol produces on the drinker is that of weakening his self-control, and paralyzing the moral will that would guide him aright. A very common symptom of this evil effect is seen in the drinker being puffed up with an overweening sense of his own importance. When sitting with his tap-room companions he lays down the law with a confidence that infallibility itself might envy. At home he asserts his mastership with a decision and sternness under which wife and children cower. At work or in business he despises those who would instruct him, or tender him advice; and, as an employer, he is exacting as becomes one who feels what a mighty man he is. The result of this state of things is seen in the quarrels that are so frequent between persons who have been drinking, but are declared to be 'perfectly sober.' Two such meet, neither of whom can brook the presence of an equal, and words of hauteur or contempt on the one side or the other excite anger which finds expression in blows.

"Now, this is an alcohol-produced condition that may have very serious consequences when the men thus swelling with pride have onerous and responsible duties to discharge. The confidence begotten of this pride is a confidence that has its foundation in obliviousness of danger. Take the case of the engine driver on a railway. The alcohol that puffs him up

with an exalted sense of his own importance, blunts his apprehension of danger, and at the same time impairs the clearness of vision and steadiness of hand on which safety depends, and he is thus placed in a position to do and to dare what a man who had not touched drink would shrink from doing. Who can tell the number of accidents that have been caused through those on whom the safety of trains depend being unbalanced by drink, and so rendered heedless of danger and forgetful of duty? Then, there is furious driving on highways and on crowded streets, resulting in numerous accidents. Some are acknowledged to be the result of drunkenness in the drivers; and the recklessness to which the majority are attributed is no doubt largely the result of the liquor that has made the drivers heedless of danger, while leaving them to all appearance 'perfectly sober.' Then there is the seafaring world, the members of which have the reputation of an unhappy *penchant* for liquor. The commander of a ship holds a position of the very greatest responsibility, and in virtue of that responsibility he is entrusted with autocratic power. The safety of precious lives and of a valuable ship and cargo, depend on the sound judgment which a very little alcohol impairs. It is not to be doubted that many a ship has been lost through those entrusted with her safety tampering with alcohol. At the moment of writing there appears in the daily papers an account of a Board of Trade inquiry into the stranding of a vessel on the Chili coast. We read: 'Allegations of drunkenness were made against the master, but the court, though they found he had taken drink, could not say that he was drunk,' but they found that 'the stranding was due to negligent navigation,' and suspended the master's certificate for nine months. It is not difficult to imagine that there would have been no 'negligent navigation' if there had been no drink. Amongst the temperance facts bearing on this matter is the confession of an experienced ship's captain, who, on one occasion, getting on deck after a comfortable dinner, at which he had enjoyed his wine, felt so proud of his ship and her belongings, and of

himself as her commander, that he ordered more sail, and insisted on his orders being carried out in spite of such hints as to the imprudence of so loading the masts, in face of the fresh breeze then blowing, as his officers could venture to give; but who soon after, when the effect of the drink had passed away, and in his sober senses he could see how the masts were bending almost to breaking and the ship was in the utmost danger, ordered a shortening of sail, and shuddered at the thought of what might have been the result of the folly which only the drink he had taken had led him to be guilty of. The 'moderate drunkard' stands in great danger of becoming a helpless and hopeless drunkard; and, in the meantime, his potentiality for mischief, involving injury to others as well as himself, is very great, and is not at all adequately realized by those who encourage by their example the use of alcohol as a beverage.

ALCOHOL AND CRIMINAL LAW.

The International Monthly for the Abolition of the Drinking Customs has an article on the above topic illustrating the progress of the movement in Switzerland. It is as follows:

"In the excellent proposal for a new criminal statute for Switzerland, from the pen of Professor Charles Stooss, jurist, of Berne, are found two paragraphs which demand special attention, proving as they do, that our efforts and aims are becoming gradually understood, and have gained the ear of distinguished jurists. It is not a question of abuse, but simply of the punishments to be meted out to offenders under the influence of alcohol. And it will be noted how closely the Swiss proposal corresponds with our views, since in the nature of the punishment, Professor Stooss mainly aims at the cure of the drinker, and blends harmoniously punishment with curative treatment. Article 25 runs thus:—'If the crime attributable to excessive indulgence in spirituous liquors, the judge shall be empowered to prohibit the offender

from entering a licensed house for from one to five years.' Article 26: 'Should an offer be made to receive the drinker into an asylum for inebriates, the judge, on medical advice, and independently of any punishment, may order him to be detained there for a period of from one to five years.' The grounds for these proposals are found in a work on criminal jurisprudence by the same author, from which we make the following extract: 'In many cantons the judge *has* the power to prohibit the offender, whose crime is owing to drink, to enter a public house for a stated time. This unique law exists in certain cantons only. The ruffian who, when in a drunken state, commits acts of violence, the monsters who cannot control their drunken lust, care nothing for a fine or short imprisonment, but the deprivation of the right to visit the beer house cuts them on the raw and robs them of the chance to give loose rein to drunken passion. This provision could not be applied to large towns, but has been found most efficacious in country places. Again, dipsomania is a disease. The dipsomaniac, like the consumptive, should be handed over to the physician. Though the disease be self-caused, it is a danger and an injury to the public weal, and the most fruitful source of crime. Not only assaults and rows are begotten in drink; murder, manslaughter, rape, the causes of calamities, which destroy the life of hundreds, stand in close relation to it. If it is the duty of the State to protect the community against dangerous lunatics, it is no less so to guard it against the madness of the drunkard. The canton of St. Gallen has the following laws: 'Habitual drunkards can be committed to an inebriate home. The period of restraint shall extend from nine to eighteen months. In cases of relapse the period may be extended. When opportunity offers, an offender may be removed from a penitentiary to an inebriate home. Work is indispensable in the treatment of drinkers, but is not everything, and treatment in a home is necessary to complete the cure.' Professor Forel adds: 'We heartily approve this humane, just, and judicious law. Doubtless, men of the old school will fall

foul of it. But the common sense of the Swiss nation, which never refused to listen to plans of true progress, will not be deceived by the old litany of imperiled rights and invasion of the liberty of the subject. The proposed changes accord with the true spirit of the times, and are in harmony not only with scientific experiment, but with the opinions of the most clear-headed and most eminent juriconsults of the present period.'" —*Temperance Record.*

DEATHS FROM CHLORAL.

Dr. Comstock gives the following in the *Hahnemannian Monthly:*

"It seems to be a remarkable coincidence, at this day of great advances in medicines, that the well-known English scientist, Professor Tyndall, and the late Emperor of France, Napoleon III, should have both succumbed to the incautious use of chloral. Tyndall was not only a scientist, he was versed in medicine. Why should so learned a man in England have been so injudicious and reckless as to have selected chloral as a hypnotic? From the reports of the case he seems to have been habituated to its use, as it was his custom to take a dose every night, at bedtime, to relieve his insomnia. We can scarcely believe that the profession in London should have been unmindful, not to say ignorant, of the insidious dangers of chloral. We accept it as a fact that so distinguished a man as Tyndall would only take chloral on the advice of his family physician. When chloral was first introduced into this country (the discovery of Dr. Lebreicht of Berlin), it was at once employed by the profession as a hypnotic. A large experience has proved it to be a drug having its appropriate place in therapeutics, but its use has been followed by so many accidents and deaths that the profession now regard it with suspicion, and employ it seldom and only with many precautions. As one of the antidotes for strychnine it is recommended; and the reverse is true,

that the tonic effect of small doses of strychnine will alleviate the toxic effects of chloral. Chloral contracts the pulse, and in larger doses depresses the heart's action and materially lessens the respiration with heart failure, finally ending in profound narcotism. If there is found to be any atheromatous condition of the arteries or fatty degeneration of the heart or tissues, such as a man of Tyndall's age might be liable to have, chloral would be a dangerous agent, and positively contraindicated.

"With all these facts well known to every qualified medical man, two such illustrious personages as Tyndall and Louis Napoleon III have been fatally poisoned and sent to their eternal sleep by chloral. The death of Napoleon, in 1871, was supposed at the time to have been the result of a surgical operation, and the real facts in the case have been suppressed from the public as well as from the medical profession. But this fact is now demonstrated to me. It is well known that Dr. Thos. W. Evans, the celebrated American dentist of Paris, assisted the Empress Eugenie to escape from Paris during the late war with Germany. Dr. E. informed the writer of this that he intends after a proper time to publish all the facts incident to the death of Napoleon III at Chiselhurst. I have not only the authority of Dr. Evans, but also the statement of Dr. Gage of London, in saying that Napoleon did not die from the shock of a surgical operation, but from a dose of chloral administered two days after the operation. Louis Napoleon began to complain early in 1870, and was in failing health at the commencement of the war with Germany, but although his French medical advisers stated that he had some kidney or similar affection, they never accurately recognized or made known the exact nature of his malady. At the time of the battle of Sedan, and when he was captured, he was suffering most intensely, and the cause of his suffering (which was then unknown) proved to have been 'a fit of stone.' Not until his arrival in London, and at his residence at Chiselhurst, after consulting Sir Henry Thompson, was the true diagnosis of his ailment

made known. By a careful examination of a patient, and sounding, the existence of a stone in the bladder was diagnosticated. The operation of lithotomy was advised, and it was made by Sir Henry Thompson, on the 10th of January, 1873, and, with the assistance of several physicians, the calculus was removed. The Emperor endured the operation well and reacted satisfactorily, and joy reigned within the imperial household. Everything looked favorable. On the day following the operation his temperature was normal, and he took nourishment with a relish, and was full of hope and in the best of spirits. Sir Henry Thompson regarded him as being in no danger. Napoleon's son, Prince Louis, who was then a pupil at Woolwich, was at home during the operation, but returned to school the next day after the operation, as the whole outlook was decidedly hopeful.

"In England it is the custom, when a surgical operation is necessary, for the surgeon to make the operation, but for the attending physicians to make all the prescriptions. Sir Wm. Gull was the Emperor's physician, and, on the evening of the 12th of January, the second day after the operation, a dose of chloral was ordered. The Emperor objected to taking it, and even absolutely refused to do so, because a dose of it had been given him the evening previous, and, although it produced sleep, it left him with such a feeling of oppression and malaise, that he remarked in a common sense way that as he was doing well and suffering no especial pain, he did not think another dose was required. (If the suggestions of the imperial patient himself had been followed, it might not have been so well politically for the peace of Europe.) The eminent Sir Wm. Gull insisted that the medicine should be taken, and the Empress was appealed to to advise the Emperor to obey his doctor. Through her persuasions the Emperor yielded, and the dose was swallowed. The action of the chloral upon Napoleon was to produce great depression, followed by a profound euthanasia that ended in an eternal sleep — the sleep of death. Sir Wm. Gull, so well known as the court physician of Queen Victoria

and the Prince of Wales, has passed away, but Sir Henry Thompson still lives, and the surgeon who successfully removed the calculus was not responsible for Napoleon's fatal sleep. After Napoleon's sudden death there was, as if by a consensus of agreement, little said in the London medical journals about it, and no official report of the autopsy was ever given. This action was resolved upon out of respect to the feelings of the sadly afflicted and ill-fated Empress, whose many disappointments in this life have been truly overwhelming.

"In Professor Tyndall's case an overdose of chloral was administered by his wife, but from what the public now know, we hope that death by chloral may never again claim any more such illustrious examples as a Tyndall or a Napoleon."

DRINK AS A CAUSE OF INSANITY.

At a meeting of the Magistrates' Sub Committee of the Glasgow Police Board with the officials of the Glasgow Barony Govan Parochial Boards, the following statement was submitted by Mr. Andrew Wallace on behalf of the Govan Combination Parochial Board:—

The object of this meeting, as I understand it, is to lay before the Magistrates some facts that have come under the notice of the inspectors as to the relation between the consumption of intoxicating drink, specially that class of spirits commonly called "finish," methylated spirits, or "fusel oil" and insanity. I may say at the outset that I have never had any means of ascertaining with any degree of certainty what kind of spirits the pauper lunatics who have come under my charge had been consuming, but I have no hesitation in saying that the consumption of spirits, whether adulterated or not, has been the most potent cause of pauper lunacy that I know of, and if the Magistrates propose to deal with the question of the sale of adulterated spirits, so as to lessen pauper lunacy, I think it may be useful that they should

know to what extent intemperance is a cause of insanity, so that, if possible, they may deal with the whole question of the immoderate use and the common sale of intoxicating drink. It may not be generally known by the Magistrates that pauper lunacy in Glasgow, and indeed in Scotland, has very greatly increased during the last twenty years. A very few figures will serve to show the extent of that increase. Take, for example, the parish of Govan Combination. At May 14, 1874, there were chargeable to the parish 165 pauper lunatics. At May 14, 1893, the number had increased to 563 pauper lunatics, the increase being in the ratio of 241 per cent. The population of the Combination in 1871 was 151,402, while in 1891 it had increased to 284,982, the increase being in the ratio of 88 per cent. So that the pauper lunacy has increased at a ratio of nearly three times greater than the population. The average cost per annum of each pauper lunatic is £30, including maintenance, management, medical attendance, and lodging, and this gives a total cost in 1893 of £16,890; and as the other two parishes have as many lunatics as Govan, this gives a grand total cost of £50,670 for pauper lunacy per annum, and it is still on the increase. I may here state that in 1874 the total number of registered paupers in Govan, including dependents, but excluding lunatics, was 3,205; in 1893 the number was 5,036, or an increase of 57 per cent., being 31 per cent. less than the increase of the population. The same ratio of increase in pauper lunacy and relative decrease of pauperism has occurred throughout the whole of Scotland, as is borne out very clearly in the annual report of the Board of Supervision for the year ending May 14, 1892. I need not, therefore, go into the statistics in detail. Now, as regards the relation of drink to pauper lunacy, I would not give my own experience, but that of Dr. Watson, the medical superintendent of Merryflats Asylum, for the year 1892. Of the admissions into the asylum for that year, where the causes were ascertained, nearly 43 per cent. were due to drink; 15.3 per cent. were due to hereditary predisposition; 15.3 were due to epilepsy,

and to no other cause was the percentage due to more than 6.5 per cent. The same percentages generally were given by Dr. Liddell, the former medical superintendent, many years ago. While dealing with the subject of the baleful influence of drink, adulterated, no doubt, as most of it is, I may state that while looking up some old documents to-day I came upon a report by Dr. J. B. Russell, the medical officer of health to the Committee of Health of the Board of Police, and read at a meeting on January 19, 1874, to the effect that in less than one month there were seven cases of infant suffocation by "overlaying" by drunk parents. This was at the New Year time, but Dr. Russell states that the registrar's returns gave an average of 17 deaths per annum in Glasgow of children under one year from "suffocation." Dr. Russell adds: "Although it might be difficult to produce such proof as would support a criminal charge, no person so far as I can ascertain, who has any experience of such cases, has any doubt that, with hardly an exception, drunkenness is associated with 'suffocation' and 'overlaying' of infants in bed." With the foregoing facts before them, I think the subject of not only "finish" drinking, but also of spirit drinking in general, is worthy of the most earnest consideration of the Magistrates of the city of Glasgow.

ACCIDENTS AND ALCOHOL.

The exaggerated use of alcoholic beverages as a cause of accidents is certainly an important subject to which scarcely any attention has been paid. Many a railroad disaster, many another accident destructive of the happiness of whole families, much damage to property, may be traced to the fact that a man in a responsible position has lost the clearness of his head, was tired and inattentive or indifferent and giddy, all in consequence of beverages he had taken. It is obvious that this common noxiousness of alcohol comes under the observation of the officers of accident insurances, but they have failed to make their experiences a subject of general inform-

ation. The only distinct statement of this kind we have is contained in the great statistical compilation of 1887 concerning the profession of brewers and malsters. They had 9.08 accidents in 1,000 insured, *i. e.*, more than in all other professions, even mining Killed by accidents during professional occupation we have, in 1889, 92 brewers and malsters; in 1890, 89. One hundred killed among the brewers means 63 widows and 153 orphans. How, in the presence of these figures, brewery owners feel justified in continuing the old fashion of paying their wages partly in the shape of excessive free beer is hard to understand.

After brewers the carrying business and the building trades seem to be rich in alcoholic accidents. As to the latter, Dr. E. Golebiewski, confidential physician to the Northeastern Builders Association, has published some observations in his paper, "The advantages and disadvantages of the law on accident insurance." He has investigated 3,972 accidents; 791 of them happened on Mondays, 596 on Tuesdays, 654 on Wednesdays, 619 on Thursdays, 657 on Fridays, 601 on Saturdays, 54 on Sundays. Thus the day following the "Day of the Lord," the "Day of Rest," is marked by far the worst figure, and no one would have a doubt that the cause is in the Sunday spree or in the favorite Monday drink. Especially frequent are on Mondays, precipitation from high, falling from the ladder, dropping of objects, falling through, slipping or stumbling, burning and scalding, falling in excavations. Among 413 lesions of the head, 114, *i. e.*, 28 in 100, belonged to Monday. Sometimes Saturday presents approximately the same dangerousness.

Dr. Golebiewski is very outspoken on the part played by alcoholism in accidents. He is not a temperance fanatic; on the contrary, he writes, "No one will gainsay the usefulness of alcohol" (he means whisky). The following are some statements taken from his publication: "By their own confession workingmen occupied in building operations drink every day 20 to 50 pfennigs (4 to 10 cents) whisky, mostly Nordhaeuser or Nordhaeuser with rum. Some may take

less, but others will consume twice as much. The quantity to be had for 20 pfennigs is about 250 grams (8 ounces), *i. e.*, per year 91 liters for 73 mark (about $17). After ten years it would make about 912 liters. Considering, moreover, that many workingmen, during working hours, eat but poorly and cold, deferring their warm meal to evening time, it must be admitted that the above quantity of alcohol is amply sufficient for the gradual poisoning of the workingman's organism. We have to acknowledge that the workingman engaged in the building operations, with rough air, with damp and chilly weather, needs something stimulating for his body, and experience has proved that 5 to 10 drinks of whisky per day are supported for a number of years without any injury. But, according to the quality and quantity the man drinks, and according to his constitution as well as to the food he takes, the consequences of a protracted alcoholic *régime* will sooner or later make their appearance, either in the first place as a pathologic affection of the digestive organs, as in most cases, or in some other way. In the severest cases, alcoholics are liable to delirium tremens and often find their end in an insane asylum ; in other cases they die with fatty degeneration of the heart ; or they lose prematurely the normal resistibility of their body. Since my connection with this professional branch, the subject has occupied my attention in a particular degree. In many a patient I noticed the slow and prolonged process of healing ; sometimes its sudden stoppage ; the unusual frequency of neuritic pains ; while other persons who had been injured in the same way would reach much earlier their complete recovery. As a rule, the cause of this fact was to be found in pathologic conditions attributable to the habitual use of alcohol." Thus, alcohol not only increases the number of accidents ; it also makes the healing more difficult. Golebiewski continues : " In many alcoholics the influence of alcoholism on the whole pathologic condition is mostly much greater than the influence of the accident itself. The law on accident insurance has entirely forgotten the question of alcoholism, but this is wrong. The necessity of

taking into account the question of alcoholism in all laws of this kind imposes itself at every moment. There is no doubt that a large portion of insurance rents is paid as a result of the abuse of alcohol alone."— *Medicinische Neuigkeiten.*

INSURANCE OF OPIUM USERS.

Perhaps the most important evidence secured by the British Parliamentary Commission appointed for the purpose of investigating the opium question is that tendered by the management of the Oriental Life Assurance Company, which possesses what may almost be described as the monopoly of the native business of India. According to the testimony of the directors of that institution, no extra premium is charged to users of the drug, and this estimate of the risk seems to be confirmed by the surprising fact that, during twenty years, not a single claim has been paid for death which could be attributed to the use of opium.

INEBRIETY IN PARIS.

The Chief Medical Officer of the Prefecture of Police of Paris is Dr. Paul Garnier. He is a man of wide reputation, a careful observer, a typical Frenchman, a close student of Parisian criminal life, and of the causes contributing to it. In a recent statement, as a matter of fact, and not from any sentiment antagonistic to the social customs of his city, he says:

"The progress of alcoholic insanity has been so rapid that the evil is now twice as prevalent as it was fifteen years ago. Almost a third of the lunacy cases observed at the Depot Infirmary are due to this disease. Every day it declares itself more violently, and with a more marked homicidal tendency. The accomplice of two-thirds of the crimes committed, upon whom the criminals themselves throw the responsibility of their evil deeds, is alcohol. It visits upon the child the sins of the father, and engenders in the following

generation homicidal instincts. Since I have frequented the haunts of misery and vice in Paris I have observed gutter children by the hundreds who are only awaiting their opportunity to become assassins — the children of drunkards. Moreover, there is a terrible flaw in these young wretches, a flaw which doctors do not observe, but which the pyschologist sees clearly and notes with apprehension — the absence of affectionate emotions; and as a matter of fact, if these criminals are neither anæsthetiques nor lunatics, their characteristics are insensibility and pitilessness."

The Brooklyn Medical Journal gives the following advice regarding the use of cocaine:

1. The amount of cocaine used must be in proportion to the extent of surface it is desired to anæsthetize. In no case should the quantity exceed one grain and three-quarters.

2. Cocaine should never be used in cases of heart or pulmonary diseases, or in persons of highly nervous temperament.

3. In injecting cocaine, the introdermic method is preferable to the hypodermic. By injecting into, not under mucous membrane or skin, the risk of entering a blood-vessel is avoided.

4. During injection the patient should always be in the recumbent position.

Dr. Newsholme, in a recent lecture on Occupation and Mortality, says that the vast difference between the death rates of publicans, viz., those engaged in the sale of beer and spirits, and persons engaged in other occupations between the same ages, can only be explained by the effects of chronic alcoholic poisoning. The increase of the death rate from inebriety among the general population, from 40 to 56 per million from 1860 to 1890, and this, notwithstanding the failure of the death certificates to give all the cases, was very significant.

LECTURES ON AUTO-INTOXICATION IN DISEASE, OR SELF-POISONING OF THE INDIVIDUAL. By Ch. Bouchard, Professor of Pathology and Therapeutics, Member of the Academy of Medicine, Paris. Translated, with a Preface, by Thomas Oliver, M.A., M.D., F.R.C.P., Professor of Physiology, University of Durham. In one octavo volume; 302 pages. Extra cloth, $1.75 net. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street.

This work has a special interest to every physician, and opens up lines of inquiry concerning phenomena which confronts every student. The study of poisons formed within and without the body, and their influence in health and disease, is the topic. The graphic, clear, suggestive style and and the open, frank treatment of the subject make this one of the most attractive and readable works in a very obscure field of study. The contents give the reader the best conception of its value.

The thirty-two lectures in this treatise include the following:—

Pathogenic Processes in the Main. Production and Elimination of Poisons by the Organism. Preliminaries to the Experimental Study of the Toxicity of the Products of Emunction. On the Toxicity of Urines. Causes of the Toxicity of Urine. Toxic Principles in Urine — the Part they Play in Producing Uræmia. Origin of the Toxic Substances of Urine — Toxicity of the Blood and Tissues. Origin of the Toxic Substances of Urine — Toxicity of the Fluids and of the Contents of the Intestine (Bile and the Products of Putrefaction). Origin of the Toxic Substances of Urine — Toxicity of the Products of Putrefaction and of the Fæces. Intestinal Antisepsis. Pathogenesis of Uræmia — Distinction between the Symptoms of the Pre-uræmic Period of Nephritis and the Symptoms of Intoxication. Pathogenesis of Uræmia — Discussion of the Exclusive Theories. Pathogenesis of Uræmia — the Part Played by Organic Substances

and Mineral Matters in Uræmic Intoxication. The Therapeutic Pathogenesis of Uræmia. Transitory or Acute Auto-Intoxication of Intestinal Origin. Internal Strangulation and Constipation. Acute or Transitory Intestinal Auto-Intoxication — Gastric Disorders — Indigestion — Poisoning by Tainted Meats. Chronic Gastro-Intestinal Auto-Intoxication — Dilatation of the Stomach. Dilatation of the Stomach — Etiology, Pathogenesis, and Therapeusis. Auto-Intoxication of Intestinal Origin — Typhoid Fever. Pathogenic Therapeusis of Typhoid Fever — Antisepsis of the Internal Medium. On the Pathogenic Therapeutics of Typhoid Fever — the Treatment of High Temperature. Pathogenic Therapeutics of Typhoid Fever — New Mode of Bathing in Fevers; Dieting of Fever Patients. Auto-Intoxication by Bile. Pathogenesis of Jaundice. Malignant Jaundice — Aggravated Jaundice. The Toxic Nature of Pathological Urines. Pyocyanic Disease. Poisoning Accidents in Diabetes. Poisoning by Pathological Poisons. Cholera (Three Lectures). The General Therapeutics of Self-Poisoning. General Recapitulation. Index.

A PRIMER OF PSYCHOLOGY AND MENTAL DISEASE. By Dr. C. B. Burr. Medical Superintendent of the Eastern Michigan Asylum. George S. Davis, Publisher, Detroit, Mich., 1894. Price $1.00 postpaid.

The author, an exceedingly practical man, has grouped a very valuable work, which will be warmly welcomed by the profession. It is divided into three parts, and is especially intended for an elementary class room work.

Part I is devoted to the study of the faculties of the normal mind. Examples and illustrations are freely used to bring out the relations of the various mental operations to each other. Definitions are brief and pointed, great pains having been taken to simplify psychological study, but at the same time to employ terms in their precise and technical significance.

Part II is devoted to mental diseases, causes and forms of insanity being discussed in accordance with an original plan of the author. The arrangement of the subject, impressing as it does the idea of departure from normal standards of thinking, feeling, and acting, in insanity, enables the student to grasp the salient features of each form of disease readily. Part II is, in the opinion of a distinguished medical teacher, peculiarly well adapted for the use of students of medicine.

Part III deals with the management of cases of insanity. This part of the work cannot fail to be of service to the general practitioner, as well as the medical student and attendant, although especially addressed to the latter. Explicit directions are laid down for the care of cases. The various emergencies encountered in the treatment of patients are discussed, and rules of conduct suggested for the every-day guidance of the attendant.

THREE INTRODUCTORY LECTURES ON THE SCIENCE OF THOUGHT. By Prof. E. Max Muller. Open Court Publishing Co., Chicago, 1893. In paper 25 cents.

These most excellent lectures were delivered at the Royal Institution in London, and have been read and re-read by thousands of scholars with intense pleasure. They are as fascinating as the stories of fiction, and should be read by all who are interested in the history of language and thought.

Such works as these are real contributions to the thought of the day and are indispensable for all scholars and readers.

THE DISEASES OF PERSONALITY. By Dr. T. Ribot. Open Court Publishing Co., Chicago, 1894. Price 75 cents in cloth ; 25 cents in paper covers.

Another edition of this valuable work within the means of a larger circle of readers will be welcome.

The first chapter is devoted to organic disorders, and the second treats of emotional disorders. The third chapter takes up disorders of intellect, and the fourth dissolution of

personality. In the concluding chapter the following suggestive topics are presented. Zoölogical individuality, colonial consciousness, physical synthesis, and psychical synthesis. The ego is a co-ordination.

Each of these and other phases of this very fascinating field of study are presented in a singularly graphic style that is sure to interest the reader who may not be familiar with the general subject.

BLAINE'S HANDY MANUAL OF USEFUL INFORMATION.

There has just been published in Chicago a most valuable book with the above title, compiled by Prof. Wm. H. Blaine, of Lancaster University. Its 500 pages are full of just what its name implies — useful information — and we fully advise all our readers to send for a copy of it. It is a compendium of things worth knowing, things difficult to remember, and tables of reference of great value to everybody, that it has never before been our good fortune to possess in such compact shape. Our wonder is how it can be published at so low a price as is asked for it. It is handsomely bound in flexible cloth covers, and will be sent to any address, postpaid, on receipt of 25 cents in postage stamps, by the publishers, G. W. Ogilvie & Co., 276 and 278 Franklin street, Chicago, Ill.

A SYSTEM OF LEGAL MEDICINE. By Dr. A. McLane Hamilton, and L. Godkin, Esq., with other collaborators. E. B. Treat, Publisher, No. 5 Cooper Union, N. Y. city.

This work, consisting of two large volumes. is in press and will comprise one of the most complete studies of medical jurisprudence ever published. Each special chapter is written by the leading authorities in that field, and the whole will comprise an exhaustive study brought up to the present.

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THE STRIKE AT SHANE'S. A sequel to *Black Beauty*. A Prize Story of Indiana. Written for, and revised, copyrighted, and published by the "American Humane Education Society." Price ten cents each. Boston.

The Strike at Shane's is an interestingly written story of how the animals and birds on the farm of a grinding, thoughtlessly cruel farmer brought him to a correct appreciation of their real value by withdrawing their support and assistance, by exercising the right of human toilers and going on a strike.

MESSAGE TO YOUNG MEN — WILD OATS, by REV. J. P. GLEDSTONE, is the title of an eight-page leaflet, No. 27 of THE PHILANTHROPIST SERIES.

It is one of the most effective appeals for purity of life, and true manliness ever written, and should be read by young men everywhere. It should be circulated by the million. Price by mail, twenty cents a dozen; one dollar a hundred. Address, THE PHILANTHROPIST, P. O. Box 2554, New York.

"NIL DESPERANDUM." Published by the American Humane Education Society. Autobiographical Sketches and Personal Recollections. By Geo. T. Angell, President of the American Humane Education Society and the Massachusetts Society for the Prevention of Cruelty to Animals. 19 Milk street, Boston. 1894. Price by mail ten cents.

George Keil, 1715 Willington street, Philadelphia, announces the early publication (third edition) of the *Medical and Dental Register-Directory and Intelligencer* for the States of Pennsylvania, New York, New Jersey, Maryland, and Delaware. It will present not only a complete list of all medical and dental practitioners in the States named, with place and date of graduation, but also lists of professional educational institutions, hospitals, societies, etc., and will be of much practical value to all members of these professions.

Science. A weekly journal, published by N. D. C. Hodges of 874 Broadway, New York city, has been twelve years before the public, and is the great weekly paper for the working scientists in this country. New facts and new discoveries of every kind are noticed here and commented on before they go into permanent form. A trial subscription is offered for one dollar a year to new subscribers.

No more acceptable gift can be sent to those who are students of science.

The *Popular Science Monthly* is the strongest magazine published, devoted to popular science. The particular feature of this journal is accuracy of statements. Its contributors are experts who present each subject with scrupulous care, and the reader has full confidence that they are the best and most reliable statements of scientific facts up to the present time.

The *Homiletic Reviews* for March and April are exceptionally strong journals, in vigorous robust thought. Its writers comprise the ablest thinkers and writers of the day. Published monthly by Funk & Wagnalls Company, 18 and 20 Astor Place, New York, at $3.00 per year.

The Voice is the leading paper of the prohibition party, is vigorous, aggressive, emphatic, and eminently fair in controversy. Funk & Wagnalls, N. Y. city, are the publishers.

The *Phrenological Journal* of Fowler, Wells & Co., N. Y. city, grows with the years, in new and absorbing interest. No journal is more helpful and suggestive to the practical man or woman in every circle of life.

The *Review of Reviews* is without any rival in the literature of the English Language. No other journal gives a more perfect picture of passing history.

The *American Medical Temperance Journal* under the editorial care of Dr. J. H. Kellogg is one of the most attractive pioneer journals now in the field.

Editorial.

EVIDENCE OF INEBRIETY.

The study of the phenomena of inebriety is beset with great difficulties. The patient may both consciously and unconsciously mislead and conceal the real truths, and the observer will form erroneous conclusions. Many of the facts depend on the statements of the inebriate and can only be verified with difficulty. The drink history, comprising a record of when and where and how spirits are used, is open to various sources of error, which may be corrected by persons who have observed these facts. But the facts of the origin, causes, and conditions of the drink impulse depend largely on the conceptions of the victim, and such statements are the most difficult to confirm of all neurological inquiries. Such persons often have congenital abnormalities of consciousness analogous to astigmatism, or color blindness, and are unable to judge correctly of a motive or conditions which seem to lead to certain acts and lines of conduct. Many of these cases have defective brain developments and organic perversions, followed by states of exhaustion and depression, for which alcohol or some other allied narcotic is a most fascinating means of temporary relief. In addition to this the use of spirits has a special degenerative influence on the higher psychical centers, paralyzing and destroying the power to correctly judge of the nature and character of truth.

The inebriate is incompetent to ethically or intelligently understand the import and meaning of his conduct, and hence will deceive the investigator, exaggerating certain facts and concealing others. Often following some sensory suggestion, and always keenly sensitive to any form of psychical pressure, such as the supposed theory of his case, entertained by others, or any conception which will appear

to him to lessen the gravity of the drink offense, or in some possible way create sympathy in his behalf. If in a court for some crime associated with drink, he will deny everything or confess to acts not true, and at all times his confession will be exaggerated and often describe motives and conduct that are unreal and unnatural. The reasoning may be clear and accurate on matters not concerning himself, but utterly unreliable concerning his drink acts and motives.

The statements of a drinking man in a police court or a hospital, and in a reform meeting, will vary widely, and yet no apparent design be present. If these variations are brought to him for explanation, he will show confusion and deny them in general. A case was sent me as an example of vice at first, the history carefully studied by a competent observer. My inquiry revealed an exactly opposite state, and from the same history which to a large extent was based on the statements of the inebriate. A long-continued study of this case brought out another class of facts, and confirmed the experience of all students as to the worthlessness of evidence based on the inebriate's conceptions of his case.

Practically a full statement is recorded of the inebriate's theories, and then evidence is sought to disprove or confirm it. Exceptions to the natural history of such cases are regarded with suspicion and doubted unless sustained by other facts. Inebriety is usually found to be uniform in its origin and progress. The same general range of causes are common to each one, and the same general growth and development will be found in each one. Investigation and study of these cases requires long patient gathering and comparison of facts, always open to error and correction.

PSYCHICAL INEBRIETY.

We use this term to describe a class of cases that have sudden spasmodic impulses to procure spirits, and drink to intoxication at once. There is no premonition, the mind and body appear in the best condition to resist morbid impulses,

when almost instantly the man will rush to a saloon and drink as much as he can procure, and become delirious or stupid in a few moments. If left to himself he will repeat this once or twice, then recover and be greatly prostrated, and if a sensitive person will manifest great contrition and melancholy.

Usually these cases are confused as to the memory of events occurring during this drink paroxysm, and are incredulous of the statements of others, supposing such accounts to be exaggerated for the purpose of alarming them. The delusion of power of control is common as in other cases. The mind seems to be in a frenzied spasmodic condition in which memory and consciousness are held in abeyance and are inactive. These states resemble masked epilepsy, in the suddenness and intensity of the attack, and they differ from the dipsomaniac impulses in being indescribable. The latter will manifest in word and act an all-pervading thirst, and increasing demand for relief, while the former in a dazed, bewildered way will seek and use spirits, as if dying from thirst. Muscular agitations and explosions of nerve force, moaning, and acts of violence, such as pushing, kicking, and striking without purpose or object are also common. The following case is typical. A lawyer, age 42, who had drank in moderation for years and to excess at long intervals, after four months treatment recovered. After two years of abstinence he suffered from severe mental shock, and drank to stupor for two days in his room. For the next two years he drank at uncertain intervals and was destructive at the time, and suffered from fever and exhaustion for a few days after. Coming under medical care and observation it was noted that after uncertain intervals, in which he appeared to be in the best of health and full control mentally, he would disappear and be intoxicated in a very few minutes. On one occasion, while holding a pleasing conversation, and in seeming good spirits, he suddenly turned pale, rose abruptly, seized his hat, and ran at the top of his speed nearly a mile, where he bought a pint of spirits and drank it. Then

rushed to another saloon, bought half a pint, drank most of this, and began to throw things at the bar-tender. He resisted restraint wildly for a few moments, then became stupid. He slept the next day and recovered after two days, appearing as if he had suffered from severe wasting illness. On another occasion he was seized before he could procure spirits, and resisted in a wild automatic way, striking, kicking, and shivering convulsively for a short period, then became drowsy and slept for a few hours. Bromides were given with good results. His flushed face and wild staring eyes, with convulsive tremors, seemed more like masked epilepsy. In a case reported on good authority, a farmer who had similar attacks, while running to a saloon to procure spirits fell into a stream of water, and was rescued with difficulty. He was taken home stupid. On a similar occasion he was purposely thrown into a stream of cold water, and taken out restored. On another occasion he injured a bar-keeper who refused to give him spirits, and died in jail from some unknown trouble. It would appear natural that such cases might have homicidal impulses after the first impulse for spirits were partially gratified. The histories of some criminals who have drank before crime was committed seem to confirm this. These convulsive crazes for spirits are practically unknown, and suggest a new field of observation that promises many practical facts. There is no doubt very intimate relations exist between epilepsy and convulsive diseases, and crime and inebriety. Imbecility shows the same tendency to convulsive seizures, in which morbid mental and physical impulses are prominent. These cases may be called psychical at present, but no doubt when studied their true relations will be understood, and the conditions and causes outlined.

One of the curious facts brought out in the opium investigation is that, in a population of one hundred and ninety millions in the opium district of India, in the year 1890, the

average consumption of opium was one pound and a fraction over one-fourth for every man, woman, and child. It appeared that the amount consumed had not increased in ten years in greater proportion than the rate of population.

DR. McCARTY, THE AUSTRALIAN PIONEER.

The same old storm cloud of persecution and opposition has gathered and broke round the great Australian pioneer student of inebriety, Dr. McCarty. It is a veritable repetition of the same story, and the same misrepresentations, persecutions, slanders, and violent opposition, which greeted the late Drs. Turner and Parrish, and Dr. Day, together with many others, both living and dead. A long list of pioneer workers went down in the furious opposition which greeted their first efforts to establish the fact of the disease of inebriety, and its curability in hospitals for that purpose. Others braved the storm and struggled on waiting for a recognition which in many instances only came after death. An outline of Dr. McCarty's experience and history shows that he began in 1859 to agitate the subject of the medical treatment of inebriety, and the need of special hospitals, in the *Melbourne Argus*. After fourteen years of continuous agitation by letters to the press, lectures, and appeals, Dr. McCarty gave up a private practice of twenty years' duration and opened an inebriate asylum under a corporation, at Northcote, near Melbourne. In 1871, the government, through its secretary, promised to provide land and houses and a grant of money. In 1872, twenty-two acres of land was purchased by money raised from voluntary subscriptions, and a mortgage loan was given on the property for the balance, and the home was opened for patients the next year — 1873. The government gave the corporation a small grant of money which was expended on the buildings, and refused to extend any other aid after that time. In 1877, Dr. McCarty purchased the property from the trustees, and the loans were all changed to his name, and from that time it

was conducted as a private asylum under a special act. In 1884, the Lunacy Commission refused to grant license to continue the asylum, and began proceedings to take the property away from Dr. McCarty, claiming a defective title, and an act was passed abolishing all private retreats. Dr. McCarty had bought this property, assuming all liabilities and promising to continue it as an inebriate asylum during his lifetime. The value of the property having increased immensely, the government determined to possess it for a public institution. Accordingly, a bill was passed appropriating the property as the government should see fit to use it, and Dr. McCarty was ordered to vacate after a certain date. The reason given for this was, that government wished to establish a charitable inebriate asylum, and Dr. McCarty had no technical title to the property which practically belonged to a corporation that was extinct; hence, it would revert to the State. His enemies asserted that he had made a failure of the asylum, when in reality he had been in charge for fifteen years, beside making the asylum self-supporting; he had paid out of the earnings fifteen thousand dollars for interest and on the capital.

There was no question of the conduct of the asylum and success of treatment during this period. The central object was to obtain the property at all events. Of course, Dr. McCarty was turned out and the asylum closed, and twenty years of active labor in this direction was ignored as unworthy of any notice. The Board of Lunacy and the government authorities assumed the role of banditti and demanded the property or life, and having obtained one sought to destroy the other by destroying his reputation.

The same old story of personal persecution, of slanderous stories of Dr. McCarty's incompetency and dishonesty were repeated, until we seem to be reading the history of Binghamton Asylum, only the events are bolder, less scrupulous. We are too far away to feel the bitterness and suffering inflicted on Dr. McCarty and his family, by this most iniquitous event. We are also far too familiar with similar

instances of the rankest injustice to hope for change or redress by protests.

Our association sends Dr. McCarty our deepest sympathy and profound assurances that

> "In our lives, in our works, in our warfare for man;
> And bearer — or borne upon — victory's shield,
> Let us fight battle-harnessed, and fall in the van;
> Hold on, still hold on, in the world's despite,
> Nurse the faith in thy heart, keep the lamp of God bright,
> And my life for thine, it shall end in the right."

CHARGES AGAINST THE FOXBORO ASYLUM.

The old story so familiar in all asylums for inebriates has come into notice again at the Massachusetts State Inebriate Asylum at Foxboro. Cruelty to patients, poor food, neglect of proper care, and free whisky, and patients running away all the time, bad, immoral influences from attendants, and unfit patients, are the common charges that have been urged against every asylum in this country.

Sometimes special prominence will be given to one or more of these allegations, but all of them are urged in every case. These charges are always made by discharged patients and their friends. The more degenerate and disreputable the men, the more persistent the charges. Not long ago a legislative committee examined some witnesses who claimed to have been abused at an asylum. It appeared that the father of one of the injured patients was a spirit dealer, and had surreptitiously sent him brandy while in the asylum, and urged him to run away, and otherwise disobey the rules. The other case was a criminal tramp and pauper, who was discharged for profanity and stealing. The charge of poor food is the complaint of every one, and would be made of the richest and most excellent diet that could be served anywhere. Cruelty to patients always turns out to be want of attention and neglect to provide them such delicacies as they may consider essential. Should they violate any rules, the punishment would be cruelty.

The abundance of spirits in every asylum is always a delusion with a small basis of fact. All patients of such asylums have the delusion that spirits can be had and are drank freely by many persons. In reality, it is always difficult to procure spirits, and almost impossible to drink secretly or in moderation. One of the common delusions is that of having spirits or being able to get them. In reality, the opposite is true. Violent and immoral conversation is always condemned by those who are most guilty of this, and so on through all the list of charges. The complainants are always the most guilty, unreasonable, and disreputable of witnesses, and the charges are always unsupported and malicious.

Notwithstanding the same charges have been made year after year in the papers, and disproved continually, they are taken up by the press again and furnish the idle gossip of the hour.

The asylum at Foxboro is one of the most promising and practical institutions of the country, and under the care of thoroughly trained, scientific physicians. Fortunately, it is beyond the power of delusional maniacs and gold-cure defenders to destroy. It can bear rigid investigation and criticism from any source. While the management may be embarassed by these detractors and unjust critics, the public will soon ascertain the real source and motives for this, and join in defending and sustaining one of the great pioneer asylums of the world in a work that will occupy a very large field in the near future.

CLASSIFICATION OF INEBRIETY.

A general grouping of cases from an etiological study brings into prominence three distinct classes, viz.: hereditary, acquired, and neuropathic. The hereditary forms are direct and indirect. In the direct are tendencies to use spirits both for their taste and effects; in the indirect are cravings for relief which spirits more than all other substances satisfy. Physical and psychical defects are included

in this class, in which low vitality and tendency to exhaustion provoke a desire for spirits.

In the acquired or developmental form, there are certain specific causes, of which traumatism, both physical and psychical, are common. The physical causes are blows on the head, severe injuries to the body, heat and electrical strokes. The psychical are shocks from profound emotional disturbances, such as fear, grief, joy, and excitement; also alcohol in any form used suddenly to excess, causing intoxication; also lead and other mineral poisons; also syphilis, and repeated gonorrhoeal infections. In the general causes of this class are defective nutrition, elimination, and aëration. Persons who are overfed or underfed, and who neglect the functions of elimination and the quality of the air inhaled, are of this division. Climate and environment are active factors in many cases, and belong to this form. Contagions, imitations, and psychical forces are of this class. Among the favoring causes are superstitions, bad moral and mental states, and psychical degenerations.

In the neuropathic class are placed all those cases in which some marked psychosis exists, and the inebriety is only one of the family group. Melancholia, mania, epilepsy, hysteria, and many other neuroses, are of the same family. The inebriety appears from some unknown exciting causes. The periodical cases are found in this class, and the uniformity of the appearance and duration of the paroxysm points to a degenerative psychosis as the basis of these cases.

Dipsomania is found in all these classes, particularly in the hereditary and neuropathic types. It comes direct from inebriate or insane parents. These cases always appear at the climacteric periods of life. They may quickly develop from the use of beer and spirits, and are associated with paroxysmal exhaustion. Atavism appears in both of these classes. The early moderate use of spirits takes on some form of organic degeneration often covered up for a long time. In some cases the direct alcoholic degeneration halts

at a certain period, and while spirits are used every after in limited quantities, death follows from some acute disease. In other cases degeneration directly traceable to spirits continue to death. These cases are always in the psychopathic class. In another class the spirit craze halts and is followed by mania, melancholia, or acute inflammation of the vaso-motor nerves, stomach, liver, lungs, or other organs, and recovery follows, and a long period of invalidism ends in death. Cases in the traumatic class go on rapidly to a fatal issue, often in suicide or homicide. Cases of acquired inebriety frequently recover suddenly from the prayer and pledge, and as often relapse, in most unusual conditions. Many cases of all classes are closely allied to epilepsy, others to idiocy, imbecility, and low forms of pauperism, criminality, and reasoning insanity.

Inebriety is far too complex a disorder, and the facts of its origin and pathology are not clearly enough known to sustain any exhaustive classification at present.

STUDY OF CASES IN STATION-HOUSES.

The Kings County Medical Society have appointed a committee to inquire into the care and disposition of persons found on the streets suffering from partial or complete coma. At present such persons are at the mercy of the police, and cannot be admitted to the hospital if there is the slightest suspicion of alcohol being the cause. The police decide this, and consign the victim to the cell of the station-house. If it is from sun or heat stroke, or cerebral hemorrhage, or any other possible cause in which spirits were taken at the last moment, there is no discrimination, and the patient dies of neglect. In Brooklyn and New York city these cases are very numerous, and the deaths in the station-houses are equally common. There is undoubtedly a great evil in this and serious wrong that demands relief. The committee to investigate is a very able one, and composed of Dr. J. H.

Raymond, Dr. J. C. Shaw, and Dr. L. D. Mason. The latter is secretary, and we take pleasure in asking our readers to write Dr. Mason, 171 Joralemon street, Brooklyn, N. Y., any facts or cases which may have come under their observation. It is the purpose of the secretary to make a study of these sad cases, which may or may not be associated with inebriety, and point out the means and methods of treatment. The JOURNAL OF INEBRIETY will publish these studies in the future, and we urge our readers to aid Dr. Mason by notes and references as far as possible.

THE large number of gold cures in Massachusetts, and their wild claims of success, innocently tempted a member of the legislature to offer a resolution for a committee of inquiry into their merits. With a Barnum-like strategy, the leaders of these cure-alls rushed around and hunted up some of the Foxboro incurables who had run away or been discharged, and gleaned from them the most doleful charges of wrongs and cruelties practiced at this new State asylum, and filled the Boston dailies for a week with the wildest sensational charges. As a result, gold-cure inquiries were put aside and all interest was turned to Foxboro; thus public attention was diverted, and the gold-curers have escaped investigation. In meantime this young struggling asylum and its management are filled with astonishment at the falsehoods and slanders and excitement which have suddenly burst over them without warning or premonition. The gold-curers may postpone the evil day by this method, but the "mills of the gods will grind on, and the judgment day will come at last." Fraud, deception, and trickery will always have their own Nemesis.

DR. ALBERT DAY, so well-known to all our readers, has an elegant home at Melrose Highlands near Boston, Mass., where two or more select cases can be accommodated, with the luxury of superior surroundings and expert medical care.

PERSONAL LIBERTY.

The drunkard insists on destroying himself, his family, his property, and breaking down all law and order, and is a literal anarchist. Society endures this, and the plea of personal liberty is raised when his conduct is questioned.

Science indicates that such conduct is insane, that the drunkard has no right to any liberty that brings peril to himself and others. He has no right to be a source of suffering and loss to any community. That he has no right to marry and entail on the next generation weakened vitality, diseased tendencies, and incapacities to live normal lives.

No man has a right to destroy his reason by drink, to become diseased by drink, to destroy his moral sense and conception of right and wrong.

The higher laws of duty demand that such conduct be repressed by depriving the victim of liberty which he is so obviously unfit to enjoy.

DR. CHARLES MCCARTY is now an old man, having given over thirty years of his life to the study and medical care of inebriates in Melbourne, Australia. He has been practically twenty years in active charge of Northcote retreat, until it was seized by the government. As a writer he has attracted much attention by his clear, vigorous papers on this subject. Few of the younger students of inebriety are aware of his early efforts over a quarter of a century ago, and we hope to give some notice of his work in the near future.

WE give in this number two very significant papers on Delirium Tremens. They are both by expert writers and may be said to convey the best and most advanced knowledge of this subject up to the present time. These papers were originally published in the *Medical and Surgical Journal* of Boston, Mass., and *Medical News* of Philadelphia, Pa.

THE superstition that all inebriates who commit murder are sane and conscious of the nature of their acts, has broken out again with greater intensity than ever before. Six inebriates are under sentence of death in Connecticut, Rhode Island, and Massachusetts. In every case delirium, delusions, manias, and histories of extreme alcoholic excess preceded the homicide. Yet the courts and jury have decided they were of sound mind and fully responsible.

THE Washingtonian Home of Boston, Mass., has taken a new lease of life under the care of Dr. Ellsworth. It has been refitted and changed materially in all its appointments. If its board of managers recognize and provide for the new and larger demands of the class they treat, a career of great prosperity will come to them.

THE March number of the Chicago Magazine of CURRENT TOPICS is replete with timely articles covering a wide range of subjects. The contributors include some of the most popular magazine writers in the country, whose work will insure a cordial reception for the March number. This magazine has been making giant strides in popular favor, by reason of its high character and wide range of its matter, and the popular subscription price of the publication — $1.50 a year, 15 cents a copy.

Clinical Notes and Comments.

MORPHINISM.

Dr. Waugh, the eminent writer and clinician, gives the following very clear views in the *Medical World:*

"There are several things that must never be forgotten in relation to these cases. The first is, that stopping the morphine is not curing the disease, but only a preparation for the real treatment. People stop it themselves, or they go to various sanatoria to be "cured," but they don't stay cured. After the drug is discontinued and the immediate effects of the stoppage have passed off, we are confronted with these questions: 1. What is the condition that led this person to use morphine? 2. What changes have taken place in his system, due to the use of morphine? 3. How strong is the force of *habit* with him, and how can we overcome it?

"In the first place, we find back of the morphine habit an inveterate neuralgia, rheumatism, neurasthenia, insomnia, or one of those degenerations of the cerebral tissues that lead to dementia, melancholia, what we used to call softening of the brain — but most frequently, perhaps, that form of mental aberration that gives the law such perplexity, paranoia. Chorea, spinal irritation, myelitis, and hysteria have made their previously unsuspected appearance when the morphine mask has been torn off. What folly to think, then, that all one has to do is to stop the morphine to "cure" the disease. The fact is, no mortal man can tell whether any given case *can* be cured, or what is really the matter until the morphine has been taken away. Sometimes, very rarely, we are compelled to tell our patient he had better resume the morphine; and once in awhile we are compelled to advise the friends to take him to a sanatorium where he can spend a year with a capable physician, in combating a para-

noia, seeking to check the degeneration, and rebuild the nervous tissues. Well it is for the patient if we can induce him and his friends to see the impending evil and take the proper means to avert it before it is too late to arrest the disease. Too often we are unable to obtain legal control until some overt act has made the brain disease evident even to the unskilled eyes of judge and jury.

"My second point is that the period of drunkenness or morphine addiction does not leave the man in the same condition as it found him. This is the weak point of the nostrum people, whose "cures" have a curious habit of dying suddenly during the treatment, or soon after it. Has any one noted how many of Keeley's people die within two years of their cure? The physician is but a bungler who sends out his patients to take on themselves all the burdens of this hard battle of life, just after throwing off a narcotic habit. Every one of those poor, benumbed nerves is throbbing with new-found life; each is exquisitely sensitive to noxious influences, and yet we expect such a man to rough it among the strong men that run this world. I tell you, after stopping the drug, the first question should be whether the man is able to do anything at all; the next one, what he can do. I recollect a fine young doctor whom I sent to Kansas to cut wood, and I have always regretted I did not make it a year, since seeing the benefit he derived from it. To be sure, most patients think they cannot afford to follow such advice, and then we envy the Czar, who tells people to do and they do it."

DEPOPULATED BY OPIUM.

W. Hoffner, manager of the Société Commerciale, which owns large stores on the Marquesas and Dominique Islands, says that the natives are dying off very rapidly on those islands by reason of the use of opium, and that in a short time there will be none left. The past year has made fearful inroads on them.

"The deaths have been so frequent that lately the French Government has been doing all it could to suppress the opium traffic, but with meagre success. It hinders it in some ways, but in the main it is carried on as before. The French Government introduced opium into the islands about twenty years ago, and now a vain effort is being made to stamp out the evil. It is, however, too late to remedy the wrong.

"The natives are dying off like flies. In ten years, if the present rate of mortality keeps up, there will not be one of them left. The last few years have been especially severe and made terrible inroads on the population. Where the natives cannot get opium to satisfy their cravings, they substitute a brandy obtained from the cocoanut tree, which is even worse than the product of the poppy juice. The liquor is nothing, in fact, but the natural sap of the cocoanut tree. The islanders bore holes in the tree, and the sap almost immediately begins to run. This process kills the tree, but they do not care for that. The liquor is stronger than opium, and I have seen the poor natives drunk on it and lying about like dead men for three or four days.

"They do not smoke the opium, but eat it, and in enormous quantities. They eat so much of it, and have such abnormal cravings for it to the exclusion of almost every other desire, that they do not buy the amount of general merchandise they ordinarily would. As a result, business is bad in the islands. Trade, outside of opium, has fallen off a great deal, and the people seem to have lost the energy and desire to advance that they once had. It is so quiet there now that I think I shall return to Chili, where I was before. When the native population is wiped out altogether, as now seems to be its fate, the islands will be an excellent field for emigration. I am not sure that at present the French Government would encourage immigration."

Mr. Hoffner says there are now very few Americans on the Islands.

The following, from *The Voice*, is significant of a great change in old-time discussion of the alcoholic problem:

"If a man wants a drink of whisky, for instance, and knowing the price of whisky to be 15 cents a glass, pays that sum and receives the whisky in return, by no stretch of reasoning or language can the transaction be described as robbery. It is a legitimate contract carried out according to law and common sense."—*Chicago Post.*

That is true only on condition that the man's action *is a voluntary one.* But you know, and every other man knows, that in millions of cases the action is not a voluntary one, and that the man would give all he possesses if he wasn't compelled by an insidious disease which the saloons are engaged in promulgating, to pay out that money. For what other reason are men by the tens of thousands rushing off to "gold cures"? That disease is as much a compulsion, though a more subtle and diabolical one, than a bludgeon or a revolver would be. Moreover, what about that man's wife and children?

THE *Battle Creek Sanitarium* is one of the finest equipped Hotel Hospitals in the world. The best appliances and means known to science are in use here. No invalid can find a better place for rest.

THE tonic which has come down with a constantly increasing reputation after long years of trial and experience is *Horsford's Acid Phosphate.* It is the most reliable and valuable remedy that can be used.

THE *Bromo Potash* of Warner & Co. is the best form of this remedy we have used. We find it most palatable and effective. We would urge a trial of this effervescing mixture above all others.

THE Rio Chemical Company of St. Louis, if it had never done more than present to the profession its valuable *S. H. Kennedy's Extract of Pinus Canadensis*, would have placed the profession under a lasting obligation to it. There is no more healthful, stimulating, and generally beneficial application that can be made to a diseased mucous membrane than this. — *Med. Mirror.*

HYPOPHOSPHITES. — According to an interesting article by Miss Frances E. Willard, on "Reminiscences of the Late Sir Andrew Clark," Sir Andrew seems to have had a limited confidence in medicine. At the conclusion of his interview with her, he gave her the following advice: — "Take as little medicine as possible; accept your sufferings. Strength is perfected in weakness. In labor you will find life. If you are terribly run down sometime, go away for a fortnight's rest, and with each meal take a teaspoonful of *Fellows' Syrup of Hypophosphites.*"

DR. CHAS. NEDSKOV, Sorrento, Fla., says: — "*Papine* alone and in combination has been quite satisfactory. A case just dismissed may serve as illustration. The patient, a married lady, I found suffering severely from congestion and

neuralgia. After preliminary treatment I ordered *Papine*, teaspoonful doses, half-hourly administered. Pain relieved after third dose, and next day she felt, to use her own words, 'a thousand times better.' Combined with Bromidia, a very noted improvement was effected in a case of 'nervous prostration' and inveterate chronic insomnia."

THE *California Grape Food Co.* manufacture a concentrated, unfermented *grape juice* which in many respects is one of the best compounds of grape juice on the market. We have used it as a tonic in several cases with most excellent results. For states of chronic gastritis and general nutrient debility, it has proved one of the most valuable remedies we have used. There is evidently a great future in this remedy, and a wide field for its application in many cases of disease. Send to Norman Barber, 77 Warren street, New York city, for circulars.

THE Pharmacopœia is singularly poor in vegetable alteratives, and sarsaparilla, the best known and most frequently prescribed, is most uncertain in action and frequently very disappointing in results. Any well-tested addition, therefore, to our *materia medica* in this class of remedies will, we are sure, be gladly welcomed by practitioners. Some time ago we received from Messrs. Parke, Davis & Co., of Detroit, U. S. A., a sample of a syrupy compound containing the essential elements of *Trifolium pratense* (red clover), *Stillingia sylvatica* (yaw root), *Lappa officinalis* (burdock), *Phytolacca decandra* (poke root), *Berberis aquifolium* (mountain grape), *Cascara amarga* (Honduras bark), and *Xanthoxylum Americanum* (prickly ash). All these are powerful alteratives, and have been in common use by American physicians in cases of a scrofulous or syphilitic nature. The proportions of each drug contained in the syrup are given with the directions, and to increase its operative action eight grains

of iodide of potassium have been added to each ounce. We have used it with decidedly satisfactory results in some cases of chronic skin diseases of suspected specific origin. Being very palatable, children take it readily, and we have found it exceedingly useful, when combined with small doses of perchloride of mercury, in treating congenital syphilis.— *Hospital Gazette.*

TRIONAL AS A HYPNOTIC FOR THE INSANE.— In no class of cases are the qualities of a hypnotic more severely tested than in the conditions of sleeplessness occurring so frequently in asylums for the insane. Yet it is in these very obstinate cases that *Trional* has shown itself an ideal sleep-producer, being prompt, safe, and reliable in action and devoid of unpleasant after-effects. Attention to its value in asylum practice has been called by Drs. Mabon, Randa, Brie, Collatz, Schultz, Garmier, and others, and quite recently Dr. Schlaugenhausen communicated to the Medical Society of Styria his experience with *Trional* at the provincial insane asylum at Feldhof, of which he is the director. During the past year the new hypnotic has been thoroughly tested in a number of cases of various psychoses. In the vast majority, especially in chronic mental diseases attended with sleeplessness, the remedy was given with complete success. The patients enjoyed sleep of six to eight hours duration after administration of 1.0–2.0 gm., and no unpleasant after-effects were observed. In acute psychosis, however, its action was not quite as satisfactory, but it should be borne in mind that in conditions of extreme mental excitement no single hypnotic will be efficient in every case. Schlaugenhausen formulates the results of his experience in the following words:— "*Trional* is a reliable hypnotic in most instances, and must be considered a valuable addition to our list of remedies. It will gain a firm foothold among sleep-producers."

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DIFFERENTIAL DIAGNOSIS OF ALCOHOLIC COMA FROM OTHER FORMS OF COMA, WITH ESPECIAL REFERENCE TO THE CARE OF PERSONS FOUND BY THE POLICE ON THE STREETS IN A COMATOSE OR SEMI-COMATOSE CONDITION.

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The differential diagnosis of alcoholic coma from other forms of coma is not unfrequently attended with much difficulty, and not only to those who have given little, if any, attention to the differentiation of the various forms of coma, but also to experienced practitioners and diagnosticians. It may be said that certain cerebral conditions are very similar to alcoholic coma in their general symptoms — and not unfrequently mistaken for it. This is especially the result when, as is not uncommonly the case, the person is taken sick or faint upon the street, and sympathetic bystanders administer the usual dose of whisky from the ever-present "pocket flask." Under such circumstances a cerebral lesion with its accompanying stupor, complicated with the smell of

alcohol in the breath of the person, may well tax for the time being even the diagnostic skill of an experienced practitioner. A similar condition also pertains as when a person, we will say, returning from some convivial entertainment slightly intoxicated, falls and sustains a cerebral lesion. Here we have a decidedly mixed case, and unless the symptoms that accompany the cerebral lesion are well marked, such as are manifest in the case of a fracture of the skull with depression, or fracture at the base with aural hemorrhage, or a marked facial paralysis or hemiplegia, immediate diagnosis cannot be made, and we will of necessity have to delay the diagnosis until, it may be, some hours have elapsed and the effect of the alcoholic complication passed off.

It will be noticed that the difficulty of and the failure to make a proper diagnosis in these cases is first due to the great similarity under certain conditions of alcoholic coma and other forms of coma of cerebral or other origin; and, secondly, to the fact that the person who attempts to make it is incompetent to do so, or is superficial, careless, or indifferent in arriving at his conclusions, or by force of necessity due to the urgency of the case, is forced, as it were, to decide hastily, and so literally "jump at" an erroneous conclusion.

Take a hypothetical case. A person is found unconscious on the street by the police. The police are in doubt and call an ambulance. The ambulance surgeon detects the odor of alcohol, and other symptoms similar to alcoholic intoxication — stupor, mental confusion, partial consciousness; on being aroused, in a maudlin way the person may give his name and address, then lapse into unconsciousness. There is no apparent evidence of any cerebral disease or injury, or, indeed, of any other condition that could produce just these symptoms. Here is a case that certainly simulates alcoholic intoxication; besides, there is the corroborative evidence — the alcoholic odor to the breath. The decision must be promptly made. The hospital has a standing rule that "drunks" must not be taken in, or, in the official language, they are "refused." The ambulance surgeon must not break

this rule; therefore, on what he thinks is good evidence, he "refuses to remove the case," and in his desire naturally not to infringe the hospital rule, he gives the benefit of the doubt to the hospital, and the patient is removed to the station house. He is there received and registered as "drunk;" if at all demonstrative, "disorderly." He is placed in a cell. Some hours will elapse before his case is disposed of, and in the meanwhile he will sleep off his "drunk."

In due time the cell door is unlocked, but the prisoner will never appear before an earthly tribunal. The "dead drunk" has slept his last sleep. Next in order a "coroner's case." An inquest is held. The testimony is taken before the usual jury, and the cause assigned is "alcoholism and exposure;" but, unfortunately for the authorities and fortunately for the deceased, his friends are not satisfied with the finding of the coroner's jury, and insist on an autopsy, and the actual cause of death is found to be fracture of the skull, or some other fatal cerebral lesion.

A similar case occurred not long since in a prominent western city, and formed the basis of an editorial in one of our leading medical journals.* Calling attention to the evils that attend the present method of dealing with the class of cases under consideration here, it said: "The intelligent coroner's jury heard the testimony of the intelligent officers, and rendered the intelligent verdict that death was the result of acute alcoholism." A second inquest held resulted in a verdict in accordance with facts — a fracture of the skull. The testimony further brought out the fact that the deceased was not a drinking man.

We now desire to dwell more especially at first upon the differentiation of alcoholic coma from other forms of coma. Dr. J. Hughlings Jackson, F.R.C.P., in his article on "Cerebral Hemorrhage and Apoplexy,"— *Reynolds' System of Medicine*, p. 902 — thus writes under the caption "Special Diagnosis":

"*Drunkenness.*—The smell of drink must only lead us

* Journal of the Amer. Med. Association.

to a very careful examination of drunkenness, as patients who suffer cerebral hemorrhage may have been drinking, or may have taken spirits for premonitory symptoms. Oddly enough, patients soundly drunk, their real condition not being recognized, are now and then treated by doses of brandy and water.

This shows in another way the difficulties of diagnosis. A drunken man may be in one of two conditions. (1) He may be insensible without excitement; he may, indeed, be as deeply comatose as if he had extensive and fatal cerebral hemorrhage. This is so when the patient has been 'sucking the monkey,' that is, sucking raw spirits out of a cask by aid of a gas piping, or when he has drunk off a large quantity of spirits for a wager or out of bravado. In these cases, from the condition of the patient alone we cannot make a diagnosis, although, fortunately, it is usually made for us by the history. If we hear that the insensibility began suddenly, or if the patient all at once staggered and fell insensible, cerebral or meningeal hemorrhage is almost as likely.

Let us now suppose there is no history of the mode of onset, *the patient being found in the street by the police.* We try to rouse him, and we may get him to give his name or his address. There is, perhaps, some evidence that the case is not one of cerebral hemorrhage, but it had better be disregarded, as patients comatose from fatal cerebral lesions of several kinds can be aroused so far. That he resists our endeavors to examine him or swears when aroused is of no value at all as excluding fatal lesion of the brain. The patient may vomit (as he may in cerebral hemorrhage), and the vomit may reveal the nature of the case; if he does not we are justified in doubtful cases in using the stomach pump. Then the drunken patient oftener passes his urine and feces than do other apoplectic patients. Again, we may find alcohol in the urine. The mere presence of alcohol in the urine is not to be relied on to show that the apoplectic patient is suffering from a poisonous dose of alcohol only.

As before said, a drunken man may owe his coma in part

at least to hemorrhage into the arachnoid cavity. However, Dr. Anstie tells me that it would be possible to recognize the presence of a poisonous dose of alcohol in the system if one drop of the urine itself added to 15 minims of a chromic acid solution* turned the latter immediately a bright emerald green.

The other condition is one of excitement, of which there are all degrees. As we have seen, the patient, who, when left to himself, is insensible, may be aroused to resist and swear, but the main features of a case to which we are called may be one of 'uproariousness.' If the patient be violent and struggle, he is probably drunk.

A cautious man will still continue his examination for other causes, because it is certain that after severe and fatal injuries to the head the patient may struggle and swear, and even, as I saw in one of Mr. Hutchinson's cases, make a definite reply, as, 'What's that to you about my tongue?' when asked to put his tongue out. I have recorded a case supplied to me by Mr. Stephen Mackenzie, in which violence and swearing were the striking symptoms in a case of death from meningeal hemorrhage. As in this case, we have often a history of a mode of onset under circumstances which exclude the diagnosis of drunkenness. But to make a diagnosis from the condition of the patient only is quite a different thing. We can only make a diagnosis by exclusion, and the most important thing is to exclude injury to the head. The young practitioner must not hastily conclude that a patient is 'only drunk' even if he be only confused, or if he swears or is violent, or if he lies on his back insensible, growling or swearing if disturbed. If he does, I am quite certain that he will have now and then bitterly to regret trusting to such circumstances. To have said that a patient was 'only drunk' when a post mortem examination shows a fatal lesion of the brain is very painful to all concerned. Besides, deep intoxication is itself a serious matter."

* Bichromate of potash 1 part, and 300 parts by weight of strong sulphuric acid.

An article entitled "Practical Differentiation of Inebriety from Coma, etc.," written by Dr. John Morris of Baltimore, Md., was published in THE QUARTERLY JOURNAL OF INEBRIETY, June, 1879, also since appearing as a reprint.* This article is full of suggestion, and of so practical a nature that we are almost tempted to incorporate it in this paper, but we will endeavor to give an ample synopsis of it.

"The frequent occurrence of blunders in mistaking brain diseases for drunkenness, and the serious reproach they bring on medical men, render it necessary that more earnest attention should be paid to the subject than heretofore, and that a higher knowledge should be obtained of the character of the dangers incident to these accidents. Unfortunately, drunkenness has not, save in a few instances, been studied as a disease, and consequently the manifestations pertaining to it are very little understood. This ignorance is particularly unfortunate when it is necessary to distinguish between it and brain troubles."

With this statement the author then enumerates the different conditions resulting from disease or injury that may be mistaken for drunkenness.

1. Fracture of the skull.
2. Concussion of the brain.
3. Cerebral hemorrhage.
4. Embolism and thrombosis.
5. Uraemia.
6. Epilepsy.
7. Narcotic poisoning.
8. Heat apoplexy.

"In case of fracture of skull or concussion, in the absence of a history, the diagnosis is extremely difficult. Coma in these cases, frequently profound, simulates drunkenness. Alcoholic odor on breath is not a reliable guide, as a moderate quantity of alcohol, not enough to produce coma, may so affect the breath; also, alcohol is frequently given in case of accident, after the accident, before the physician arrives.

* "The Disease of Inebriety," E. B. Treat, publisher, New York, 1893.

"The temperature, the condition of the pupils, the breathing, should be carefully noted; but the true rule *is to keep the patient under close and constant watch* until a fixed diagnosis is obtained. I desire to emphasize the fact that there are conditions under which it is clearly impossible to draw the line between simple profound alcoholic coma and coma arising from cerebral lesions; or, on the other hand, to diagnose certain forms of cerebral lesions from alcoholic intoxication, until in both instances the case may have been under observation some hours. In all cases look for wounds or bruises, or depression of skull, and the usual signs belonging to all forms of cerebral lesions, *whether the breath of the patient be alcoholic or not.*"

Mr. Lawson, of Middlesex Hospital, reports a case as follows:

"The patient was taken to the police cell as drunk; examined by a physician; recovered from his apparent semi-consciousness; was able to converse after a few hours; severe cerebral symptoms came on; was transferred to hospital; died on the thirteenth day; autopsy revealed laceration of brain substance, extensive hemorrhage, and fracture or fissure extending into lambdoidal suture. A remarkable feature of this case was absence of paralysis notwithstanding severe cerebral injury, with the exception of loss of power over sphincters there was no paralysis whatever."

Cerebral hemorrhage is more frequently mistaken for drunkenness than any other trouble, for the reason that the symptoms are similar in several stages of the two conditions.

There is a stage of noisy violence and uproar in both, and then a condition of complete coma.

In ordinary cases of apoplexy we look for paralysis of one side or the other; but this does not obtain if the hemorrhage be into the pons or lateral ventricle. We may have convulsions in both diseases, but usually they are more severe on one side in apoplexy.

"*The state of the pupil cannot always be relied on as a differential test.*"

Doctor MacEwen of Glasgow says "that the ordinary opinion that dilation of the pupils is found in alcoholic coma is incorrect, but that contraction is the rule. He accidentally discovered, that if a patient was shaken, or rudely disturbed, the pupils dilated, but very soon contracted again."

He therefore lays down as a rule, that an insensible person, who, being left undisturbed for ten to thirty minutes, has contracted pupils which dilate on his being shaken, without any return of consciousness, and then contract again, can be under no other state than alcoholic coma. Unfortunately for this test, Dr. Reynolds has observed the same phenomena in patients suffering from acute softening under the same tests.

The truth is that in cerebral hemorrhage the pupils present no fixed regularity. These conditions may even vary in different cases of the same lesion.

Ingravescent apoplexy generally commences with delirium or convulsions, and coma comes on slowly and gradually. These are the cases that are frequently mistaken for drunkenness, provided the smell of alcohol is discovered in the breath of the patient.

Embolism and *Thrombosis.* In embolism, coma is sudden and transient; in thrombosis, paralytic symptoms are marked.

Uræmic coma. Generally preceded by convulsions — breath a peculiar odor — urine albuminous — and other evidence of kidney disease — patient can be catheterized and urine examined.

In cases of coma, where uræmia is suspected and there is suppression of urine, catheterization finding an empty bladder will help confirm diagnosis.

Urine may become temporarily albuminous from the inordinate use of alcohol — even when kidney disease does not exist, the urine and the action of the kidneys becoming normal after the effects of the alcohol have passed away.

Epilepsy. Is often complicated with alcoholic intoxication, as the results of it. Epileptic coma is, however,

usually of short duration. The tongue is bitten or bleeding. Where epilepsy follows an alcoholic debauch, the coma may be prolonged — possibly merge into an alcoholic coma, the patient sleeping off the effect in a few hours.

Opium Poisoning. Coma from an overdose of opium is similar to alcoholic coma. The extreme contraction of the pupils, regarded as the distinguishing mark in opium coma, may also occur, though possibly to not so great an extent as in alcoholic coma, and according to Dr. Wilks in apoplexy seated in *Pons varolii.* Dr. Morris thinks that the breathing in opium coma is slower than in alcoholic coma. The smell of opium, particularly if laudanum has been taken, can be detected, and is an important aid to diagnosis.

Heat Apoplexy — Sunstroke. "Coma is often the result of sunstroke, and mental disturbance and outward violence not an unfrequent result of aggravated cases. One valuable diagnostic mark in sunstroke always present is intense heat of the head found in no other disease except yellow fever." In cases of alcoholic coma, the temperature would be at or below normal.

Method of Examination in Coma.

First. *Head* for fracture or evidences of cerebral lesions, scalp wounds or contusions, bleeding from ears.

Second. *Face* — facial paralysis, congested or pale.
Eyes — squinting, conjugate deviation.
Eyelids — œdematous or not.
Pupils — contracted, dilated, irregular.
Mouth — bleeding, odor of breath, alcohol or opium.
Tongue — for cicatrices, or recent tooth wounds.
Body — hemiplegia or external or internal injuries or convulsive movements.
Bladder — *note absence, condition, quantity* of urine.

Examine urine for albumen, casts, other evidence of kidney disease, and also for alcohol.

In case of marked alcoholic coma use stomach pump, evacuate and examine contents of stomach, note alcoholic fumes, etc. In as far as possible, get a history of the case antedating the attack of coma.

Note the rate and condition of pulse.

Note the frequency and depth of the respiration.

Note the temperature, whether elevated, normal, or subnormal.

Endeavor to arouse patient, ascertain degree of coma, and note any response to external impressions.

"*In conclusion, observe close attention and watchfulness in all cases of coma supposed to be due to drunkenness. Many of these cases should be placed in the observation or reception ward of a hospital*—in cases of doubt, a few hours will clear up the diagnosis, and determine whether the case is one of simple alcoholic coma or something more serious. After all, this is the only plan that can be followed in a certain class of doubtful cases, and is far better than to make a hasty diagnosis, and have the usual deplorable results which a mistaken diagnosis is certain to include."

The system heretofore pursued has been most barbarous, both in this country and Europe, and is a reproach to our civilization. Dwelling on this subject, Dr. John Curnan pointedly says:

"I must enter a protest against the routine treatment of drunkenness too generally followed, viz.: Emetics or the stomach pump, cold effusion, flecking the skin with a wet towel, and then the interrupted galvanic current.

"A patient having grumbled out a name and perhaps an address, is turned over to a policeman who speedily consigns him to a cold cell to sleep off his symptoms; it cannot too often be insisted upon that a drunken man is suffering from acute poison and cannot be too closely watched.

"All police stations should have a regularly appointed medical officer in charge, and every case of sickness, or

aggravated case of drunkenness, should be put under his care.

"Certain necessary instruments and appliances should be on hand. When these precautions are taken, and when inebriety is added to the list of diseases and its treatment taught in our schools, many lives will be saved and much unhappiness spared the community."

We have taken the liberty to present the article of Dr. Morris so fully because it not only covers the subject under discussion, but shows that the abuses involved in the method of dealing with the class of cases under consideration has been before the public for many years, and the system, with some slight improvement, if any, is still in operation. We have also *italicized* those suggestions or facts in the article that we desired to emphasize and also amplified and modified somewhat the rules laid down for examination of a person in a comatose or semi-comatose condition. We may suggest also in this connection that the police might have some simple instruction in "first aid" to such cases before medical aid can be had, such simple rules as opening the shirt collar, placing the body in a favorable position, and especially avoiding rough handling, clubbing the feet, cold water affusions, etc., before a correct diagnosis be made. The various cerebral-sedatives produce symptoms analogous to alcoholic intoxication — opium has already been referred to. But we desire to call particular attention to that condition which results from the long-continued exhibition of the bromides and is known as bromism.

Bartholow describes it as follows: "Various mental symptoms are in some subjects produced by the long-continued use of the bromides. Weakness of mind, without perversion of intellection, is a very constant result of the continued use of large doses — headache, confusion of mind, *and a sort of intoxication*, had long ago been observed to follow the use of bromide of potassium in even moderate doses (Puche).

"A form of mental derangement with hallucinations of a melancholic character has been observed by Hammond and

others." Indeed, so profound is the mental depression produced that suicide has not been an uncommon sequence of this condition. "The disorders of voluntary gait, the apparent defects of co-ordination, are variously explained; but they are doubtless made of several factors of which the cutaneous anæsthesia is the most influential. The bromides possess the power to destroy or impair the irritability of the motor and sensory nerves, and the contractility of muscle, and to these effects must be attributed in part the disorders of voluntary movement." Here we have a condition very much resembling alcoholic intoxication — confusion of mind, loss of memory, partial loss of co-ordination, a stumbling, uncertain gait — cutaneous anaesthesia.

Hammond of New York reports a case in which a patient of his while under the full action of the bromides, was arrested because of his staggering gait and his mental confusion and inability to give an account of himself. This patient was taken to the station house and the justice was about to impose the usual fine of "ten dollars or ten days," when Dr. Hammond appeared, interceded for the prisoner, explained the cause of his apparent intoxication, and secured his release.

A physician related to me his personal experiences while under full dosage of bromides — his memory seemed to fail him, almost completely; he made a professional call and remained in the house two hours, when, as it was an ordinary call, ten or fifteen minutes would have been sufficient. He afterwards said the patient regarded him as intoxicated; he also told me that he endeavored to read an article to a medical friend, and was told that he repeated the reading of it several times, not conscious of the fact he had previously read it.

Those who are at all familiar with intoxication from the bromides will at once see the similarity between that form of intoxication and intoxication from alcohol.

In addition to the statements of so prominent an observer as Dr. Jackson, and the article of Dr. Morris, to which

we have already referred, we will give the testimony of two prominent observers — Dr. Norman Kerr of London, England, and Dr. A. Baer of Berlin, Germany, who, in reply to a request for information as to the method of dealing with the class of cases under consideration, courteously answered in the following communications :

The London Police and their Procedure with Persons found "Dead Drunk" on the Streets. By Norman Kerr, M.D., F.R.S., London, Eng.

Strict injunctions are given to the metropolitan police force, and to the police force of Britain generally, to exercise the greatest caution in differentiating between drunkenness and illness in cases of individuals arrested for presumed drunkenness.

In an address to police constables on their duties, on the 5th of June, 1882, one of Her Majesty's judges, Sir Henry Hawkins, inculcated on his hearers the necessity to be very careful to distinguish between cases of illness and drunkenness, as many serious errors had been committed for want of care in this respect. Yet the heading, "Drunk or Dying," appears every now and again in English newspapers. No later than the 26th of March, 1894, the London *Daily Telegraph* reports the case of a girl of 15 years of age who was brought up before a police magistrate on a charge of having been found drunk on Sunday afternoon on the streets. The evidence showed that a serious mistake had indeed been made, the girl belonging to a "Band of Hope." She had just left Sunday-school, and fallen down in an epileptic fit, having been subject to such attacks for some years. The wrongly accused girl was discharged. In this case there ought not to have been so much difficulty in the diagnosis as in the case of a man with apoplexy, or with fracture of the skull. If the case was rightly reported by the *Daily Telegraph*, the police instructions do not appear to have been properly carried out. Colonel Howard Vincent, Q.C., M.P., in his "Police

Code for the British Empire" (1889), says: "Persons found on the streets in fits should be carefully taken to the nearest hospital or registered medical practitioner." I have seen several such cases at the request of the constable, and have immediately, when in doubt as to the diagnosis, advised the convulsed person to be taken to the nearest hospital or infirmary, which has been acted on by the constable, who was armed with my visiting card, on which was indicated the doubt and a request for admission as an urgent case.

Regarding persons found insensible, Colonel Howard Vincent, who was a high police functionary, says: "Insensibility is the suspension of the functions of animal life, except those of respiration and circulation. Insensibility is liable to be mistaken for drunkenness, and it must be remembered that the conditions may be complicated with each other and with the effects of drink, and that no single sign can be relied upon in forming a conclusion on the condition of the patient. When a person is found insensible, the following points must be observed:

"*a*. The position of the body and its surroundings.

"*b*. The cause of insensibility. Place the body on the back, with the head inclined to one side, the arms by the side, and extend the legs; examine the head and body, pass the fingers gently over the surface, search for wounds, bruises, swellings, or depressions; ascertain the state of the respiration, whether easy or difficult, the presence or absence of stiffness, and the odor of the breath."

In the same volume in which Mr. Monro, Q.C., late Chief Commissioner of Police in London, in his preface, says that "this code has been in use among the police force for several years," we are told that "persons are frequently found insensible on the streets in reality suffering from apoplexy or other natural causes, the symptoms of which give the sufferer very much the appearance of persons under the influence of drink." Such cases will require great caution, especially if there is no smell of drink. "The police should be especially careful not to assume that a person is drunk,

save on sufficient and incontestable grounds; for illness or the excitement of being taken into custody may at first contribute to such conclusion. In all such cases the first thing to do is to try to rouse the drunkard by gently shaking him. If that fails, the neckcloth and collar should be loosened and the head raised a little, by which means breathing is made easier." It is also laid down that care is to be taken in conveying the apparently drunk and insensible to the station, and placing them in a proper cell. The practice of a constable, when a man is found drunk on the streets, is to take him to the police station, and in presence of an inspector apply certain tests. If the tests indicate suspicion of disease, the divisional surgeon is sent for by the inspector, and, at his discretion, sends the individual to either the infirmary or a hospital.

Though a part of the above "code of instructions" and of procedure seems proper enough, there can be little doubt that, probably from a levity begotten partly of the frequency of mere drunkenness, and partly of unacquaintance with the disease phenomena present in intoxication, the presence of drinking, as evidenced by the alcoholic odor of the breath, frequently so absorbs the attention as to throw the possibility of disease into the background.

A striking case recurs to my mind. A gentleman, aged 55, was found staggering and apparently mumbling incoherently on the street. He had been suddenly attacked by paralysis, and attempted to utter the word "Home," with his address, but could not. The constable thought he was drunk, which irritated the sufferer, who was quite conscious, happily. He saw a friend passing, and held out his hand. His friend, knowing his complete sobriety, recognized the gravity of the case, and took the stricken gentleman home. Curious to say, speech was regained on reaching his house, but the symptoms proved to be the initiation of general paralysis, which was fatal in eighteen months thereafter.

I have known a teetotaler treated, and very naturally so from the symptoms, as drunk, while insensible in an apoplec-

tic fit and suffering from a fractured skull. Nor is such an error in diagnosis confined to constables. But a short time ago a man was charged with drunkenness who had been examined and certified as "drunk" by a surgeon who had been called to the station by the inspector in charge.

The practice in London is to *put no drunkard in a cold cell*, and the instructions are *to visit a drunken man in his cell every half hour.*

A similar mistake as that related has again and again been made by *hospital surgeons*, and *apparently drunken cases have been refused admittance which afterwards ended fatally*, simply because only intoxication was seen, and hospitals could not have accommodation for the immense number of cases of drunken coma or insensibility. If there is a vacant bed, of course grave cases are never knowingly refused.

In view of the difficulty of the diagnosis between simple uncomplicated alcoholic coma and injuries or other serious lesions, I have long come to the conclusion that all cases of alcoholic coma, whether apparently complicated with disease or not, should at once be taken to special wards, either in the police station or hospital or infirmaries, or some other receiving house or home. In my opinion, the fact of being found "dead drunk" should be sufficient warrant for a constable to take such procedure on his own responsibility, if the services of a surgeon cannot at once be procured. If taken to hospital, the public purse should be at the cost of such ward provision, duly appointed and kept at a temperature not below blood heat.

There would be considerable expense incurred, but an imperative duty owed by the State to every person, from whatever cause found either unconscious or uncontrollable on the public way — a duty now very imperfectly paid in Britain — would be honorably fulfilled. I verily believe that not a few innocent lives would be saved, and that such a provision for the helpless and incapacitated would prove a true economy in the end.

Rules that govern the Berlin police in the case of persons found unconscious, etc., upon the streets. By Dr. A. Baer, Berlin, Germany.

"Every person found in coma or unconscious on the street, shall be brought immediately to a public hospital, in the first cab or carriage (*droschke*), or, if delay is possible, in a proper vehicle for the transportation of diseases. The policeman who finds a person in such condition shall transport said person on his own responsibility, without special order from his superior. In all cases, it makes no difference in the disposal of the case whether the coma be due to a cerebral lesion, an apoplexy, or simple drunkenness.

II. Every person who is found hurt or on the street in a helpless state shall be brought by the policeman (*a*) to his own house if he has one or (*b*) to a hospital if he has no lodging. In all these cases the policeman has to enquire the matter of fact and announce it to his superior police court.

III. If a person is found drunk he shall be brought to his own house, even if he is also unconscious, if the house or domicile is known or can be ascertained. The drunken person must be brought to the hospital if he is unconscious or comatose, and if his lodging is unknown.

A drunken person who is disorderly or scandalous is to be brought to the police station, and shall remain until the state of drunkenness has ceased. The name of this person is registered and then the person (having gotten over his intoxication) is given his freedom. If this person has done some wrong or has injured other persons, the fact must be announced to the police court and the person is thereupon transported to the police prison.

IV. All drunken persons brought to the police not quite unconscious, but in a helpless state, shall remain in the police room (station), which must be warmed, and a policeman shall see at short periods if the drunken person sleeps or what else he does. If there is a sign of dangerous illness a physician of the neighborhood is sent for, and if the condition is serious and the case urgent the patient is taken to

the hospital, the case is registered and announced to the superior police court."

Drunkenness, without some injurious behavior, is not punishable in Germany, as with us, subject to fine and imprisonment.

The Parisian system is most complete and satisfactory, and has been in operation many years. The description of it I take from the preface of the English translation of Dr. V. Magnan's work on "Alcoholism," translated by W. S. Greenfield, M.D., M.R.C.P., and published by Lewis of London, 1876. He writes:

"The Bureau d'Admission of the Department of the Seine at St. Anne Asylum in Paris of which Dr. Magnan is one of the two physicians, is an institution to which no exact parallel exists in England (we may add, or elsewhere). To it are brought all the cases of insanity previous to their admission to the various public asylums, and all cases of acute delirium and mania which fall under the care of the *police of Paris*. It is here that they are examined and their admission or rejection decided upon; if admitted they are drafted to the one or other of the asylums which is the most suited to the class of the patient or the form of his malady.

"The Bureau d'Admission is quite distinct from the St. Anne Asylum itself, and under altogether different administration. In order to provide accommodation for the temporary lodgment of patients on their way to other asylums and also for the reception of the more acute cases, it is provided with about 50 beds, and is fitted up in every way as a small asylum. Here there are brought all the cases of delirium tremens and simple alcoholic delirium which fall *under the notice of the police*, and a large number from the lower and middle classes of society, and here they are treated until their recovery. Cases too, of fever with delirium are not infrequent, and it need scarcely be said that acute delirious mania is also often seen. Hence it comes to pass that a very large proportion of all the cases of delirium tremens occurring in Paris and its vicinity come under observation here. . .

There is also an out-patient department to which not

only cases of mental derangement but all forms of nervous disorder, especially epilepsy, are gratuitously admitted, etc.

The Parisian system is such that all cases of mental derangements, all cases of coma, all doubtful cases, which cannot be disposed of in any other way, such as taken to their homes or special hospitals, all such cases found by the police on the streets, in boarding houses, or in public resorts, are brought to a central bureau, to which is attached a hospital, a reception hospital, where they may remain until further disposed of. This system has the advantage that the case is promptly removed, and is without delay brought under the observation of competent medical men, and is at once placed under proper treatment, or assigned to such an institution as is suited to the class and nature of the disease of the patient. There is no unnecessary delay, no lack of prompt treatment, and the dangers of a "mistaken diagnosis," which is the opprobrium of medicine and surgery, are greatly lessened, if indeed it occur at all, because those who sit in judgment upon these cases are physicians of experience, and experts in their specialties, and have opportunities and a sufficient period of time to properly diagnose and treat the cases brought to them. There is no urgency because the case is a doubtful one, and therefore no occasion for a hasty diagnosis.

In glancing over the English, German, and French methods of dealing with the cases under consideration it will be noted that there are some points in common; while the police of each nationality endeavor to secure medical aid for the person, the French by aid of the central hospital system invariably seem to secure that aid in the promptest and most direct manner.

The Parisian method does not describe the conveyance of such persons, by what method, public or private. The German method refers to the privilege of hailing a passing cab or carriage, and thus getting its conveyance from a private source, a "disease wagon," or one conveying sick persons is spoken of.

Dr. Kerr informs me that in London they do not have any conveyance similar to our "ambulance system." Cer-

tainly it would seem the large European cities ought to have all the advantages derived from the telephone, the telegraph, and the "ambulance service," as we have it in all our large American cities, at least in New York and Brooklyn. Let me recommend to our transatlantic brethren the "ambulance service," susceptible of improvement, no doubt, and yet indispensable when promptness not only, but comfort to the injured are both combined.

We believe, with the best features of the English, German, and French methods, incorporated with our American ambulance service, the best results could be obtained in careing for those who are taken sick, unconscious, or insane on the streets of our cities.

It may be of interest to give a brief statement of the ambulance service of the city of Brooklyn for the year 1893:

During the year 1893 there were arrested for various specified offences, 33,748; of this number 23,307 were intoxicated when arrested. The total "ambulance calls" were 8,705, of these 399 were specified as "alcoholism." 5,264 "ambulance calls" were by the police, the balance by citizens or institutions, etc. It will be noticed that the ratio of the "ambulance calls" for cases of "alcoholism" in comparison with other causes were about one in twenty-one or twenty-two.

The disposition of the cases of "alcoholism" was as follows:

	Hospital.	Precincts.	Home.	Not removed.	No record.
L. I. City Hospital, . .	11	..	..	..	..
Homeopathic " . .	30	12	24	198	20
Charity " . .	6	..	..	..	..
Norwegian " . .	7	..	..	..	..
East District " . .	19	..	..	..	..
St. Catharine's " . .	27	..	..	..	..
St. Mary's " . .	14	..	..	..	..
City " . .	18	..	..	..	..
Meth. Epis'pal " . .	13	..	..	..	..
Total, ...	145	12	24	198	20

Total cases, 399.

It will be observed that exclusive of those taken to hospitals, or precincts, or taken home, a large percentage were "not removed," that is, were considered ineligible cases for hospital treatment, so that if we include the 12 precinct cases, 210 persons of the 399 for whom the ambulance was called did not receive hospital treatment; of the balance 24 were taken home and as to the disposition of 20 there was no record.

A more detailed record of the cases of "alcoholism"—from the time the ambulance was "called" until the final disposition of the cases, would render this department of the "ambulance service" more effective, and by a more accurate system of recording this class of cases be the means of preventing the errors to which the present method is liable, being also, from a statistical point of view, of value as the city increases in population. This branch of the "ambulance service" will increase also, and to be effective must be thoroughly systematized, and the average so-called "drunk" be carefully examined by a competent medical officer and given, at least, the advantages that the "ambulance service" extends to the generality of the diseases and injuries.

We believe, that by selecting and combining the best features of the English, German, and French methods, the police and medical authorities can secure a more perfect method of caring for the class of cases under consideration; we might almost add a perfect method, if we consider the advantage that the "ambulance system" gives us, in handling these cases with celerity and dispatch.

With a view to enquire into, and if possible to remedy, the present method of dealing with persons who are found upon the streets by the police, said persons being in a condition of complete or partial coma, or a state of mental aberration from disease, injury, alcohol, or other narcotic drugs, a committee was appointed by the president of the "Kings County Medical Society," Feb. 20, 1894, on motion of Dr. J. H. Raymond. The committee submitted, May 28, 1894, the following report and recommendations to the society:

BROOKLYN, May 28, 1894.

Mr. President, and Members of the Medical Society of the County of Kings:

GENTLEMEN: — Your committee, appointed February 20th, to report "what means have been provided in the city of Brooklyn for the immediate care of persons found unconscious in the streets" would respectfully present the following preliminary report.

In the brief time which has elapsed since they were appointed, they have had only time to make a superficial examination of the subject, but they feel that they have already ascertained enough to warrant them in making this preliminary report, and also in suggesting some recommendations, which are based on facts which have come to their knowledge.

They are not prepared to give specific instances which have occurred in this city, yet from their knowledge of the system in vogue and from the experience of cities where the conditions are not very dissimilar, they are satisfied that in Brooklyn there can be an improvement in the methods of managing such cases.

Perhaps in no better way can these defects be shown than by narrating concisely some instances which have come to the knowledge of your committee, and as it is not their intention or desire to criticise individuals, but systems, the places in which the events occurred will be omitted.

CASE I. Man found unconscious in the area-way of a dwelling. Taken by police to station-house. Ambulance surgeon summoned. After examination, during which the smell of liquor was recognized in the breath, the diagnosis of "drunk" was made, and man left lying on the floor of the station-house. Later, a more experienced physician by chance came to the station-house and examined the man. He advised that the man be sent to the hospital, stating that it was impossible for any one to tell whether he was suffering from alcoholic coma or from a fracture of the skull. His suggestion

was carried out, and the next day the man died, and the autopsy revealed an extensive fracture of the skull at the base.

CASE 2. Man found unconscious in the street. A well-wisher, who found him, rushed immediately to the nearest drug-store and obtained a glass of whisky, which he gave him. Ambulance surgeon was summoned and pronounced the man "drunk" and refused to take him to a hospital. The man subsequently died, and the autopsy showed a fracture of the skull, and the man's history was ascertained to be that of a perfectly temperate man.

CASE 3. Man, aged 55, suffering from incipient general paralysis, was arrested for intoxication.

CASE 4. Girl, aged 15, attacked with epileptic coma, was arrested for intoxication.

CASE 5. Fracture with cerebral laceration treated for alcoholism.

CASE 6. Uraemic coma mistaken for alcoholism.

CASE 7. Man found unconscious, taken to hospital, where he was refused admittance on the ground that he was only a "drunk." Was taken to the station-house, where he died. Autopsy revealed a fracture of the skull.

CASE 8. Man seen by a policeman to be reeling in the street. Was arrested on the charge of intoxication and locked up over night in a station-house. He was able to send word to his physician, a most eminent practitioner, who had great difficulty in convincing the police justice, before whom the man was brought, that his patient never drank, and that what the policeman took for evidence of drunkenness was the result of poisoning from bromides.

The following extract from the Journal of the American Medical Association is so much to the point that we venture to quote it:

"The death of John Markey a few days ago in Chicago from a fractured skull, he having been run into by a street-car, and booked for drunkenness by the police, is another evidence of the stupidity of the average policeman, and the

careless disregard for life that obtains in this country among police officers. An inquest was held. 'The intelligent coroner's jury heard the testimony of the intelligent officers, and rendered the intelligent verdict that the death was the result of acute alcoholism.' His wife was not satisfied, as she knew her husband was not a drinking man, and she induced the coroner to have a post-mortem made, when it was found that his skull was fractured. A second inquest was held, which resulted in a verdict in accordance with the facts.

"A man is found in the streets unconscious, no matter whether it is due to apoplexy, fracture of the skull, or any lesion of the brain; he is thrust into a cell to sleep off his supposed drunk (often to be found dead in the morning) or for the same reason not received at a hospital, when if he had been properly cared for his life might have been saved. In some cases, no doubt, there may have been evidence that the party had been drinking, and probably had received his injury while intoxicated, but this is no reason why he should be neglected. The police should be instructed, so that at least when in doubt a medical man be called to see the case. The judgment, "dead drunk," is too often literally true. Instances of this character have often occurred, and within the last six months twelve cases have been noted in different cities, and it is high time that something should be done to stop it. Unfortunately, the police are not alone in this disregard of life, as two months ago two ambulance surgeons of New York committed the same mistake, we might almost say the same crime."

These instances are but samples, and they might be greatly multiplied; they undoubtedly indicate a deficiency in the public service in most cities, which, in the name of humanity, demands a remedy.

The frequent occurrence of mistaken diagnosis makes it necessary that more earnest attention be paid to this subject than has hitherto been paid. The differential diagnosis between alcohol coma and cerebral conditions simulating it is

not easy, indeed, is sometimes impossible. Fracture of the skull, concussion of the brain, cerebral hemorrhage, embolism, thrombosis, uraemia, epileptic coma, narcotic poisoning, and heat apoplexy have all been mistaken for alcoholic coma. This is especially the case when an alcoholic condition has accompanied the other condition. Such mistakes have been made by well-informed medical men, and it is therefore not surprising that a policeman or a recent graduate of medicine, acting as an ambulance surgeon, should likewise err in diagnosis.

Your committee do not at this time feel prepared to make a final report on the matter intrusted to them, but do, nevertheless, feel justified in offering the following recommendations, asking that they may be continued as a committee until such time as they are prepared to make a final report.

Recommendations. First: — That while they believe that the system which exists in Paris is, perhaps, the most perfect, by which all persons found unconscious in the streets are taken to a special hospital where they have the most enlightened treatment possible, still it is a question with them whether the distances are not so great as to make such a system impracticable in Brooklyn. They prefer, therefore, to keep this question under advisement for a longer time.

Second. That all persons found upon the street in an unconscious or semi-unconscious condition, or wandering about in a state of mental aberration, shall be removed to their homes, or if they have no homes or their residence cannot be ascertained, then to the nearest hospital, and a visiting physician or surgeon shall be at once summoned.

Third. That alcoholism or suspected alcoholism should not exclude such persons from the benefit of proper medical treatment, inasmuch as simple cases of alcoholic coma, partial or complete, are serious and demand treatment, and again, alcoholism often obscures and is associated with serious cerebral lesions. In any event, therefore, such cases should have proper medical treatment.

Fourth. If for any reason such cases cannot be taken

either to their homes or to the hospital, and must be taken to a station-house, they should be placed in rooms properly warmed, and a physician should be summoned to examine them. If they remain in the station-houses, they should be visited every half hour by the watchman, and if any alarming symptoms supervene, a physician should be immediately sent for. The practice of locking in a cell for hours without inspection a person unconscious from alcohol, whether the same is complicated with injury or not, is inhuman.

Fifth. In case of doubt, as between the police and the ambulance surgeon, a police surgeon should be summoned, and the disposition of the case should be determined by him.

Signed by the committee.

J. H. RAYMOND, M.D., *Chairman*,
J. C. SHAW, M.D.,
L. D. MASON, M.D., *Secretary*.

Those who are interested in the work of the Committee and desire to communicate with them on the subject, can do so by addressing the secretary,

DR. L. D. MASON, 171 Joralemon Street, Brooklyn, N. Y.

WHAT THE BRITISHERS ARE DRINKING NOWADAYS.

It appears from Sir W. Harcourt's statement in his budget speech that while less coffee and cocoa, strong wines and spirits were drunk last year than usual, there was more than a corresponding increase in the consumption of tea, light and sparkling wines, and beer. Tea shows an increase of 6,000,000 pounds, and is clearly ousting coffee even as a breakfast beverage. Between 1876 and 1893 the consumption of strong wines, like port and sherry, has gone down from 11,000,000 gallons to 4,700,000 — a very remarkable decline, which has to be set against an increase of 1,900,000 gallons of light and sparkling wine, as well as against the increase in tea and beer. The latter shows a record consumption last year.

A STUDY OF THE ILL EFFECTS OF TOBACCO ON THE THROAT AND NOSE.*

By William T. Cathell, M.D., Baltimore, Md.

Mr. President and Gentlemen : — Early in my professional career I attended Mr. McG., a stout, middle-aged man, who died from the abuse of tobacco in smoking and chewing. The history of this terrible case was briefly as follows: He was a brass-finisher by trade, and purposely taught himself to use tobacco, under the belief that it was a prophylactic against the harmful vapors unavoidably inhaled in that occupation. From the moderate use of tobacco he gradually drifted into the slavish habit of chewing and smoking strong plug tobacco, all the time, except for a period of about four minutes taken for breakfast, five and a quarter minutes for dinner, and three and a third for supper, even sitting up in bed several times every night either to chew, or to whiff his favorite short-stem clay pipe.

The result was that in the course of time a warty-looking pimple or growth formed under the tongue, just posterior to the sublingual glands, which gradually enlarged, ulcerated, and formed a deep sulcus at the root of the tongue, which mass gradually enlarged and become more and more malignant, until every fibre and every papilla of the tongue became diseased and enlarged to such a degree that the horrid swollen mass protruded from the mouth, with its tip and anterior third fissured and angry.

The gums became red, scurvied, and unusually separated from the teeth, many of which loosened and fell out; his breath was loaded with fetor, the lumen of the throat was encroached upon, deglutition became more and more difficult

* Read at the 93d semi-annual meeting of The Medical and Chirurgical Faculty of Maryland, held at Annapolis, Md., Wednesday, November 22, 1893.

and was finally impossible, which caused a constant dripping of saliva, resembling ptyalism. The glands of the neck, both anterior and post-cervical, on both sides, next became infiltrated and enlarged, but luckily did not ulcerate; after he could not swallow, his adipose tissue was completely absorbed, his muscles all wasted, and he became fearfully emaciated, with complexion bronzed, eyes sunk, and entire countenance hideously distorted; his blood was no longer fully oxygenated, his breathing became asthmatic, and, added to all else, he could speak with only a pitiful, tongueless, inarticulate sound, and finally, after protracted, unappeasable torture, death came to his relief, October 11, 1886, in his fifty-fourth year.

Microscopic examination of a section of the sublingual mass revealed the fibrous stroma and the characteristic alveolar structure and the epithelial cells of cancer.

His death certificate should have been *Tabaci felo de se*, effected by impregnating the glands of the tongue, mouth, and throat by an almost continuous application of the juice and smoke of King James's "baneful weed."

Encountering this case so soon after the sad death of General Grant in July, 1885, directed my attention, early in practice, to the harm that may flow from the abuse of tobacco; and since adopting a specialty that brings me into constant contact with the throats and noses of smokers and chewers, of every age and physical condition, I have continued in this enlarged field to note its effects on these parts, and while I would fain be neither a bigot nor a partizan in any tobacco controversy, I shall in this paper attempt to sum up the results of my study and experience.

Smoking and chewing, like malaria, alcohol, coffee, tight-lacing, late hours, high-heeled French shoes, and other debatable agents, do not affect all alike, and some devotees suffer so little from its use and, within certain limits, even from its abuse, as to be practically exempt from harm.

I know a man whose pipe is seldom out of his mouth except when he is eating or sleeping; and another, who lights

one cigar by the stump of another all day except when he is eating, who, when he is where he cannot smoke, is chewing, and habitually sleeps with a quid in his mouth, without any appreciable injury; and each of you know robust and healthy lovers of the weed, leading active outdoor lives, who can smoke and chew any and every kind of tobacco, good or bad, with apparent impunity.

But, notwithstanding such exceptions, I am fully convinced that, as a rule, the majority of all who chew constantly, or smoke more than two or three cigars or pipefuls of tobacco a day, venture on dangerous ground.

For this reason I would divide the patrons of tobacco into three classes: 1st, those strong and healthy people who can use it, and, within certain limits, abuse it too, without injury; 2d, those who can use it in moderation, with little or no discernible injury, but suffer if they abuse it; and 3d, those to whom tobacco is toxical, who must suffer if they attempt to use it in any way at all.

The last two cases fall within the scope of this paper, and I have seen so many diseased conditions of the upper air-passages created or made worse by it, that I have little hesitation in attributing the existence of a considerable proportion of important throat and nasal diseases that increase, or remain obstinate, to the use of tobacco by these two classes.

We all know that nicotine and the dark-brown empyreumatic oil produced in burning, are tobacco's two most harmful ingredients, and that to this oil is due the stale, pathognomonic smell of the old pipe and of the stale stump.

Nicotine is present in about 2 per cent. in the mildest Havana tobacco, and ranges up to about 7 per cent. in the strongest Virginia.

Nothwithstanding the fact that the properties of tobacco, chemical and physical, differ in chewing and smoking, and also with the variety — and in smoking, also with the method — yet the pathological action of tobacco on the upper air-passages is somewhat the same no matter in what form its

ingredients are brought in contact with them; but, as a general rule, smoking is worst, because tobacco, burning either in cigar, cigarette, or pipe, not only imparts everything natural to tobacco, but also adds the oil and other products of combustion, and discharges them hot into the mouth and upper air-passages; and the harder the burning weed is drawn in, the more deeply these go, and thus the hot smoke, impregnated with nicotine and the oil, comes in contact with every part of the throat and nose.

The smoker takes in less of the nicotine but more of the oil, etc.; the chewer little or no oil, but more of the nicotine; but both chewing and smoking involve spitting, or swallowing the saliva, and both impregnate all the fluids that come into contact with the mucous linings with tobacco. On the whole, however, I have seen chewing seriously affect as many persons as smoking, but were the mass of smokers to indulge that habit as constantly as the mass of chewers do, its ill-effects on the smokers' air-passages would be much more frequently seen, and we would much oftener find the mucous membranes of the patrons of the cigar, cigarette, and pipe in a thoroughly diseased condition, because these not only keep large quantities of the harmful constituents in continuous contact with the delicate mucous linings of the parts, but also because inferior grades of strong tobacco may be, and are, used in preparing smoking tobacco; and the burning of certain salts of potassium existing in it, and the heavy, heated smoke, are all added to its own irritating power.

In chewing, one escapes the empyreumatic oil produced in burning, which would always be terribly toxic to the mouth and upper air-passages were it not for the fact that while smoking there is an abnormal secretion continually taking place from the relaxed mucous membranes, which, although it makes a good vehicle for conveying the nicotine, yet prevents more than a fraction of it from being absorbed by these membranes, the balance being either expectorated or swallowed; and we all know that spitting

is a waste and swallowing these tobacco-tinctured secretions, either to prevent this waste of saliva, or because there is no convenient place to spit, is very harmful to the whole economy.

Of course, the one who both smokes and chews risks all the dangers that tobacco can present.

Whether the pipe, cigar, or cigarette instils most oil and nicotine, and which is safest to smoke, are also questions of importance. Short pipes and thick dumpy cigars are most apt to induce cancer, etc., and no habitual smoker should smoke his cigar down to the very end, but should throw the last third away, as analysis has shown that the arrested nicotine, nicotianin, and empyreumatic oil are there, all thickly accumulated. Using pipes with long stems, and smoking all cigars and cigarettes through smokers, enables the wise to escape much of the poison and heat, and robs smoking of half its harmful powers; and the later in the day one smokes or chews the less it injures, and the earlier in the morning the smoke or chew is taken the more it inhibits nerve-power and nutritive activity; and further, no one should shut himself up in a small room at any time, to smoke and create around himself a cloud of nicotine, for an increased amount of poison is then condensed on the delicate mucous membrane of the whole respiratory tract, and is thence taken into the entire system.

Cigarette smoking makes a delicate person's lips and face lose their natural healthy hue quicker than any other mode of using tobacco.

Tobacco is a potent agent that certainly is capable of creating a cachexy that interferes with both growth and repair, and I find that all inflammatory affections and lesions of the throat and nose, and especially those of specific origin, are more persistent, and recover more slowly in persons suffering with what I might call tobacco scurvy; and not only the specialist, but also the general practitioner, knows how difficult it is to heal lesions, whether specific or benign, in the mouths, throats, and noses of those who either chew or

smoke excessively, or rub snuff; and a scratch, pimple, blister, or wart, or a sore lip, mouth, tongue, or throat, may be made cancerous by keeping it bathed in tobacco juice or smoke, especially if the person is suffering with chronic tobacco intoxication of his system. In fact it is scarcely possible to heal a sore or ulcer in the mouth, throat, or nose of one who persists in chewing or smoking.

For the same reason, no one with decayed or broken teeth, or dental plates that rub the gums, or cut the tongue, or mouth, should either smoke or chew, for either of these may be the fatal starting-point. I have the records of five cases of epithelial cancer of the lips and tongue, four of which occurred in great smokers. Mrs. General U. S. Grant told, in 1886, that General Grant's fatal case of throat disease began by his abrading a spot in the pharynx with the rough skin of a peach he was eating, and I have but little doubt that constantly bathing this abraded surface with tobacco smoke and tobacco-laden saliva, while his blood was already drenched and saturated with tobacco poison, did its fatal work for him.

Further, tobacco certainly acts as a depressant to feeble people, and lowers their stamina; and such persons with a cancerous diathesis, or a syphilitic taint, or a scrofulous constitution, should not use it in any form, for in all such subjects, the delicate pulpy tissue of the mouth, throat, and nose is very prone to inflammatory action, and also to ulceration, from smoking or chewing, and in a large proportion of cases these degenerate into, or light up, the affection their predisposition or constitution indicates; and, in my opinion, no one who is aware that he has inherited a weak or diseased constitution, or defective vitality, should risk reducing his stamina further, by the use of this agent; and science, in the form of physiology and chemistry, teaches, and my experience confirms, that if such a one uses tobacco while growing and maturing, he will not only have a weaker body and a weaker brain, but he will also be much more liable to catarrhal ailments of the upper air-passages; and I am quite

sure that all throat and nose specialists will agree that tobacco has a softening and relaxing influence on the mucous membranes of the mouth, throat, and nose, in many who attempt its use, and induces catarrhal and other affections, and that it is unwise for certain varieties of defective people to risk its bad effects.

Neither can persons suffering with any form of neurasthenia smoke or chew without injury, and yet these are the very persons who oftenest have the FURORE TABACI; some smoking innumerable cigarettes, or lighting one cigar after another until they smoke six, eight, or a dozen a day.

Smoking also creates in some persons a persistent hacking cough, due to tenacious mucus that accumulates in the pharynx and larynx, dependent on a morbid, infiltrated condition of the tissues of the palate and throat, which often degenerates into a condition that closely resembles clergyman's sore-throat, or into diseased throat and post-nasal catarrh combined. I make an emphatic interdiction of tobacco in all such cases.

I am also convinced that in some people there exists a close sympathy between the olfactories and the nerves of the mouth, and that in some the frontal sinuses are also invaded after tobacco excesses, as gravedo and frontal headache often attest.

Besides the classes I have spoken of, whoever else finds that tobacco is injuring him should stop its use; but unfortunately, many of those it is affecting never realize that it is doing them any harm, attributing all their ailments to other causes.

When tobacco induces a sense of tumefaction, heat, and pricking in the throat it should be let alone, and those whom it occasionally makes sick, and persons with a poor appetite, and those recovering from wasting sickness, are among the ones it injures most.

The habit of swallowing tobacco-smoke and then expelling it through the nose, and also of coughing it into the lungs, are both very injurious, as they irritate and dry the

mucous membrane of the pharynx, larynx, and trachea, and subject them to the various tobacco affections. Blowing it through the nose is also harmful, as it is a fruitful cause of the hypertrophic thickening of its mucous membrane so often discovered in smokers, and the sense of smell is also greatly impaired by smoke-blowing.

I would not be understood to say that tobacco induces these affections only, but it is chiefly with them that I come in contact.

With feminine smokers and chewers I have had no experience, and with snuff-pinchers and snuff-rubbers but little; but I have encountered two cases of nasal polypi in females due to the use of snuff, which is less astonishing when we remember that all tobacco dust has a notoriously irritating affinity for the Schneiderian mucous membrane.

There is in my mind a strong suspicion that the high degree of injury that follows cigarette smoking is not due solely to the tobacco they contain, but is also due in part to its union with the so-called rice-paper wrappers in combustion; and I would here emphasize that in all smoking, and in chewing too, much depends on the quality of the tobacco.

I can usually distinguish the oral cavity of the person who carries smoking to excess by the dusky red, velvety, or hyperæmic appearance of the lining of the mouth, throat, and nose, and by the throat becoming irritable and hoarse upon every extra effort in speaking and singing.

Tobacco cautiously used is certainly a charming pleasure in ripe manhood, and a solace in old age, and is rather beneficial than otherwise to thousands of healthy but careworn and toilworn people, and also to tens of thousands of soldiers, sailors, and other idle people, on whose hands time hangs heavily; and were one to ask me how to get the good out of it without risking the bad, I should advise him, among other things, to avoid smoking another's pipe, for fear of contracting disease,—the largest indurated specific sore I ever saw was on a colored man's lower lip, contracted from another's

pipe; also, never to even smoke his own after it had become blackened and oil-soaked, and also never to light a stale stump, or habitually smoke a short stem pipe.

A cigar-smoker or a cigarette-holder, or a new or freshly burned clay pipe, in point of safety and cleanliness, is far superior to putting mouth-to-weed in smoking, and one's whole mouth and throat should be thoroughly cleansed with water after every smoke.

Neither striplings with unformed constitutions, nor weakly growing youths, should venture to either smoke or chew, because in youth the vital centers are all unripe and delicate, and the mucous membranes are then marvelously hypersensitive to the effects of smoking and chewing; and if a growing boy's, or an undeveloped puny youth's, mucous membranes absorb either nicotine or the empyreumatic oil of tobacco, it poisons his springs of life, and stunts his development mentally, morally, and physically; and if he expectorates these poisons, then the loss of saliva lessens the growth and repair of his delicate and easily injured vital centers, and I am positive I have seen more than one unripe devotee stunted in body and mind; and I could at this moment name half a dozen young men and boys who are injuring their throats and noses with cigarettes, who will later in life have granular or follicular pharyngitis, somewhat akin to clergyman's sore-throat, with an annoying discharge of mucus from the posterior nares into the throat, with relaxed tickling uvula, which may hang on for years, and neither get well nor kill, but be an annoyance to himself and to every one around. I know a feeble, narrow-shouldered young man, who is at this moment cigaretting himself to either the invalid's couch or the grave, through his delicate mucous membranes; and we, as hygienists, can do the weakly ones of the rising generation no greater service than to point out tobacco's injurious effects on their throats, upper air-passages, etc. I have observed but few youths whose sensitive mucous linings could endure tobacco's toxic influence without showing symptoms of weakness, morbidity, and disease;

and were I to recast our pharmacopœia, I would not only call hyoscyamus hensbane, aconitum wolfsbane, and arsenic ratsbane, but would be strongly tempted to give tobacco the synonym of youthsbane.

If any one considers this indictment overdrawn, let him stand at Broadway and Baltimore Street, or at Charles and Preston, or at any other spot where he can see a constant stream of passing men, boys, and youths, and carefully scan all the immature and sickly devotees who pass with cigar, pipe, cigarette, or quid in mouth, and he will soon detect written on many of their faces and figures the unmistakable signs of tobacco cachexy, some with pale, sharp, wizened visage, round shoulders, shuffling walk, and anxious, nervous, tell-tale addresses; others with complexions stained an ugly green or a dirty yellow or a dusky bronze color, as if their blood were turned to a greenish or yellowish fluid, instead of the natural red.

The mouth, throat, and nose of a healthy person have a clean, smooth, pale, pinkish, or lilac hue. Examine these tobacco mouths, throats, and noses, and you will find every part unclean and ugly; probably a mouthful of saliva, as offensive as a bar-room spit-box, that must be either expectorated or swallowed before you can begin to examine; tongue furred, teeth incrusted with a dirty, scurvy-like, greenish deposit; the buccal surface of the cheeks either in a state of active or sluggish congestion; gums, palatine arches, velum palati, pharynx, epiglottis, larynx, Schneiderian membrane, and all the other soft tissues turgid and injected, or velvety, granular, purple with hyperæmia, and streaked with mucus, instead of being a clean, natural red.

You will find, however, in this flaccid throng, that all have one set of muscles that are firm and strongly developed — *i. e.*, the muscles of the mouth and lips — made so by the local exercise of grasping the cigar, pipe, or cigarette with jaws, lips, and teeth, together with the constant gymnastic motions of chewing and spitting.

Some of this tobacco throng will present cases of ozena;

others catarrh of the throat or nasal passages, buccal inflammation, epiglottitis, relaxed and tickling uvula, chronic tonsilitis, laryngitis, trachitis, hoarseness or nasal twang in talking, due to thickening within the larynx, loss or impairment of smell, rotten breath, etc., which can easily be interpreted by the experienced; and I risk nothing in asserting that five per cent. of all constant smokers and ten per cent. of all constant chewers, and twenty-five per cent. of all who constantly do both, are affected with one or another of these affections, and not thirty per cent. of immature and sickly smokers' throats and noses will be found in a perfectly normal condition.

I do not think any one can safely use tobacco in any form in boyhood or early youth, and I am sure that smoking before the eighteenth year and chewing before the nineteenth year cut off from many a youth half his stamina, and lessen all his natural talents and attributes; and I ask you to-day, as anatomists and physiologists, to think of a frail boy, or a callow youth, who secretes and then ejects half a pint or a pint of tobacco-tinctured saliva daily, while both he and his friends are wondering why he is below par. You know and I know that it is as unnatural and harmful to him to keep his sensitive absorbents and lacteals bathed in tobacco-tinctured, tissue-altering saliva, either by smoking or chewing, as it would be for a fifteen-months-old colt to carry heavy weights on his back; and the delicately constituted youth, who learns to "chaw" because others do, or to show his rough side, or tries to blow as big a cloud of smoke as the other fellow does, is injuring himself mentally, morally, and physically; and although he may not realize it now, yet the day is not far distant when he will know it, and know it with regret.

In conclusion, I believe the majority of those who arraign tobacco, from King James in 1641 down to the cranks of to-day, draw their indictments entirely too heavy. Personally, I have little or no prejudice against the proper use of the weed, either in smoking or chewing. Nor would I dare

to say that every votary of tobacco is injured, or is on the road to ruin. Life is short, and every one should get all the rational, harmless enjoyment out of it he can; and while I am perfectly willing to agree that some can use either mild or strong, good or bad tobacco very freely, and experience no ill effects, I am also quite positive that it is highly injurious to the upper air-passages of all youths, and also to numerous adults, and that to some of these the free use of even the mildest and best tobacco is almost akin to suicide; and I think that we as physicians should counsel all growing youths to shun it entirely, and every adult with defective stamina, or a tendency towards any organic disease, or a bias for any cachexy, or an inclination towards any affection of the throat or nose, either to let it alone forever, or to determinately limit its use to a harmless quantity.

ALCOHOLISM AND INSANITY. — The part which alcohol has played in the genesis of insanity in Ireland has been brought out in bold relief in the special report, just issued, of the Inspectors of Lunatics in that country. Of the medical superintendents of the twenty-two district asylums, twenty agree that, in their experience the most prevalent cause of insanity, after heredity, was alcoholism. The proportion of cases of lunacy due to alcohol varied from 10 to 35 per cent. of the whole admissions. The reports from two asylums pointedly refer to transformed inebriate transmission. The superintendent of the Ballinasloe district says that the offspring of inebriates are liable to many neurotic diseases, and, from Killarney, that cases of epileptic mania have occurred in the children of inebriates. — *British Medical Journal.*

HARVARD COLLEGE trustees have at last decided that no rum, brandy, or claret shall be permitted at reunions of classes or college commencements. This is a great innovation, and significant of a change of public sentiment.

A CONTRIBUTION TO THE STUDY OF INEBRIETY.

By Charles McCarthy, M.D., Inebriate Retreat, Northcote, Melbourne.

Hon. Member American Association for Cure of Inebriates. Hon. Member Council of the Society for the Study and Cure of Inebriety in England.

As to statistics of cure, they are valueless unless based on large numbers in inebriety, where the public demand a new definition of cure, namely, its permanency. The inebriate has such a craving for stimulants or narcotics, etc., that if not under restraint, he cannot refrain from over-indulgence; the drunkard can, if he choose.

The inebriate is suffering from disease of the nervous system — he is laboring under moral insanity. There is no inebriety in a medical sense without disease of the brain, either functional or structural. The man may appear to reason well, but though his language may be sane, his conduct is insane. Generally speaking, no exhortation, no consideration (temporal or spiritual), no ruin staring him in the face, no affection for family will weigh with him; indulge he must, and will, until he becomes helpless. Consequences are nothing to him before indulgence, and everything after; then his remorse imposes on his friends, who determine to give him another trial. But, alas! the paroxysms and the scenes are repeated until he dies, or becomes insane.

To say that this state depends on vice, betrays extreme ignorance. It may have been so at first, but it is disease now.

What are the causes of inebriety? They are numerous. The most frequent cause is indulgence in alcohol acting on a constitution predisposed to nervous disease; were it not for this predisposition, the person's excessive indulgence may

terminate in lunacy or death, without his becoming an inebriate. Next to this, and nearly allied to it, but much more difficult to cure, are hereditary cases, which are very frequently periodical. This heredity may be from parents or grandparents, or from more remote sources. There is nothing strange in this. I have often called the attention of parents to the fact that the new-born babe did not resemble either of them, when I was informed that it resembled an uncle or an aunt, or more distant relative. It is quite certain that all children inherit some taint or peculiarity of their parents or relatives—some children one thing, some another. When the father and mother are both drunkards before the child's conception, there is great probability that the child's nature will be degraded, so that it may be born an idiot; or, when grown up, become imbecile, consumptive, an inebriate, a drunkard, or a criminal, the source of whose misfortune is never dreamed of. Many of this class inhabit the jails, the lunatic asylums, or end their lives on the gallows.

It is not outside this consideration to state that the neglect of early religious and moral training and education will very materially tend to insure and accelerate the degradation necessarily resulting from heredity and over-indulgence, and at the same time certainly impede, if not hinder, the cure of inebriates. I think it very improbable that an inebriate who does not believe in a future judgment, can be cured, as he has no motive strong enough to induce him to have recourse to any self-denial, which is certainly necessary as an adjuvant in effecting permanent cure. This is no contradiction of the view, that inebriety is a disease, as our lunacy doctors well know and utilize in practice.

This question of heredity as to drink, profligacy, lunacy, ignorance, indulgence, and all inherited unhealthy states and diseases, is a question of the utmost importance, and should engage the serious consideration of legislators, and of all those who wish well to posterity. This is of more importance than the interest of the liquor trade. As inebriety is a frequent cause of insanity, so may it also be a symptom

of insanity. Sunstroke, shock, grief, melancholy, remorse debilitating diseases, injury to the brain, in fact any cause that may produce insanity, may be the cause of inebriety. A sound mind requires a sound brain and healthy body; yes, and healthy ancestors, those who have marriageable sons or daughters, should not forget this. I need say no more, nor perhaps so much, to a medical audience, but others may profit by these warning remarks, which are free of all technicalities.

What is to be done about inebriety? Let the medical profession insist upon the establishment of inebriate retreats, suitable for all classes; the chief secretary said last month that if Parliament desired it, he would establish them. Let the medical profession, the only persons capable of viewing this matter in all its bearings, speak out on the subject. It has latterly been the custom here to exclude medical men from commissions on subjects which they only know anything of, and the consequence is that from want of knowledge, recommendations are made to Parliament by commissions of laymen, and members of Parliament think they ought to carry out these recommendations as if they were made by experts (see the absurd blunders and mistakes of the New Inebriates' Act passed a few days ago; it must be amended next session). I need scarcely say anything as to the medical treatment, my main dependence being on time. I give no hope of cure in less than three months in the mildest case, six months being required in the majority of cases, and twelve months, or longer, in bad cases; yet the new Act says three months must be the maximum time! but says thoughtlessly, the time may be prolonged if a wife and two medical men each make a solemn declaration, that the man that has lived in the retreat for three months is not cured!!

Again it says, that if the patient be out for a time with the superintendent's consent, he shall be punished by being kept in longer. Again it says, the patient may be detained until as hereinafter provided; that hereinafter refers to Section 10 of the old Act, which is omitted in the new.

The same ignorance appears in the Lunacy Amendment Act; more faith is placed in ignorant jurymen than in medical men. The fact is, that many members of the community who have access to the public press feel it their duty to make a greater sensation when they hear of a case of doubtful insanity being sent to the asylum, than if that same lunatic committed half a dozen murders before his arrest; but presumption is always accompanied by ignorance. I may here be permitted to state, that for many years I have been of opinion that where lunacy is pleaded in a capital case, the jury ought to be composed exclusively of medical experts. There has been a popular opinion, that women are more difficult to cure of inebriety than men. That has not been my experience; women are certainly more easily managed in a retreat than men, and I think as easily cured, if not more so, than men. For sixteen years that the retreat is open, I never had a death among my female patients, and very few among the males; only two males I think directly from drink.

There is no mystery about the treatment, and I therefore shall not detain you with it. Australian youths are decidedly more opposed to discipline than Europeans, and therefore more difficult of cure. Any opinion formed from practice outside a retreat as to the curability of men or women of any age, is of no value, from the fact that alcohol cannot be kept from them; confinement in a jail does not meet the question. My own opinion is, that men and women of any age can be cured if sufficient time be afforded. I believe that twelve months in a retreat will cure 80 per cent., six months 60 per cent., three months 30 per cent., but in a shorter time than three months, I only expect recovery, not cure. Too frequent visits, and too much correspondence, will hinder cure. Vicious patients are mostly drunkards, and require years for cure; a penitentiary is their proper place, not an inebriate retreat.

I shall now, with your permission, venture to make a few remarks that may be useful to the younger members of the

profession, in relation to drink. The first is, that if they are called to a suckling baby in convulsions, they make special enquiry as to whether the mother takes gin, especially if there be a succession of convulsions. Another is, never to recommend spirits of any kind to a nurse for the sake of the child, under the impression that it would improve her milk in quantity or quality; any nurse that cannot do without alcohol, ought not to suckle at all. Be extremely careful in prescribing spirits to patients; whatever quantity you order will be exceeded and continued longer than you intended. Women will absolutely deny to the medical man, even to their husbands, that they take alcohol to excess, or at all, but attribute their state to nervous debility. When you find a man, especially a publican, who cannot take his breakfast without alcohol, tell him he is on the straight road to inebriety. Warn the police not to put a man helplessly drunk into a cold cell; discourage the use and abuse of tobacco, as well as of alcohol, by example and advice; do these things as a conscientious and moral duty, and when so acting, fear not pecuniary consequences. The trust and confidence bestowed by patients on conscientious medical men is extraordinary, and where offense is taken against moral advice, the medical man feels that he performed a sacred duty.

THE Postmaster-General has decided that no applicant shall be appointed to the position of postmaster in a town where at any time he has sold spirits. He says, "I am convinced that any man directly or indirectly interested in the liquor business is in a measure unfitted by his occupation to fully discharge his official duties in any branch of the postal service."

A PHYSICIAN recently died in Wisconsin who was a tea inebriate. He had for years chronic indigestion from the large quantities of tea used. He was delirious and exhausted and finally died of paralysis.

PROHIBITORY LAWS.

The following extract is from a criticism of an article in the *Popular Science Monthly* for June, entitled, "Should Prohibitory Laws be Abolished?" by Dr. T. D. Crothers.

"To any one who will examine from the scientific side the various questions concerning the drink problem, and the remedies offered, many new facts and conclusions will appear. From this point of view, the accumulation of facts and their comparative accuracy is required, with indifference concerning any possible conclusions they may indicate. Wherever personal feelings and self-interest enter into such inquiry, the value and accuracy of the results are impaired. As in a law court, the question is simply one of *facts* and their *meaning*. Some of the facts may be grouped and studied!

"In a general way it may be stated that the physiological action of alcohol on the body is practically unknown. Theories of its value as a food, as a nutrient, and as a force-producer, and its usefulness as a beverage, when examined, are found to be unverifiable or untrue. Evidence of its value in health and in moderation rests on theory and superstition, and is not sustained by appeals to facts.

"The question of its value as a medicine is by no means settled. Men eminent in science, and fully competent to decide, express doubt, or deny its value altogether. Leading physicians and teachers of medicine prescribe less and less spirits, and the extent of its use in disease is becoming more limited every year.

"The evidence of its value as a beverage is doubtful, to say the least, while the disastrous effects of alcohol cannot be questioned, and the accumulated evidence of years brings this fact into increasing prominence.

"A historical retrospect of the legal efforts to control and restrict the use of spirits suggests an evolution and growth

that has not been considered before. Outside of biblical literature, whose teachings and laws are so often quoted, a remarkable chapter of legal enactments and restrictions can be traced. Beginning with the fragmentary inscriptions found on Egyptian papyri and monuments, and extending to the codes, philosophies, and enactments of the greatest philosophers, rulers, and judges of Grecian and Roman civilization, there is a continuous record of prohibitory laws and restrictions concerning the use of spirits and drunkenness. The laws of the Spartans were far more absolute than any modern enactments, and were also remarkable for the clear comprehension of the nature of spirits and their action on the body. These laws were active for many years, and were highly commended.

"English history contains many records of prohibitory, restrictive laws, some of which were very prominent for a time, then fell into disuse. Laws of similar import have followed the path of civilization from the earliest dawn and wherever spirits have been used. They have been urged and defended by the greatest philosophers, teachers, and leaders of civilization.

"Prohibitory laws and enactments in this country are a repetition of the reform efforts of centuries ago, only on a higher plane, showing decided evolution and growth. The laws of those early times were based on observation of the ill effects of spirits, and the expediency of checking these evils. The same laws in modern times are founded on moral theories and facts which seem to indicate no other means for relief.

"In all times the sanitary evils of drink have been recognized at first only faintly, then in an increasing ratio, down to the present. To-day scientists and sanitarians are beginning to understand the perilous and dangerous influence of alcohol in nearly all conditions of life.

"Modern prohibitory laws appear to be founded on mixed theories, and are not clear or harmonious in their workings. The applications of these laws, from the earliest settlements

of the country down to the present time, give abundant illustrations of this. In several States prohibitory laws have been on trial for a quarter of a century and more, and have seemed to meet the expectations of their supporters. In others such enactments have been abandoned after a short experiment for various complicating reasons. Political partisanship has been so intimately concerned with these questions that the facts are very obscure.

"The assertions and denials of the practical value of prohibitory enactments are equally confusing. The only unbiased authority from the census and internal revenue reports, in the states where these laws are in force, points to a diminishing use of spirits, better social and sanitary conditions, and lessened lawlessness.

"Widely different explanations of this fact are urged and defended with great positiveness. High license and local option have their warm defenders and bitter opponents. Their value in different communities rests on the same uncertain and differently explained facts; often their adoption or rejection is mere caprice, political selfishness, and the changing sentiment of the hour.

"The theoretical scientific study of spirits and their effects opens up another field that brings a wider conception to the problem. Here the student is confronted with the same evidence of evolution. Theories urged two thousand years ago — that drunkenness was a disease, and that spirits was an exciting cause, in some cases merely exploding a condition which was due to influences more remote and widely varied, or building up a morbid state which will require the narcotism of spirits ever after — have become demonstrable facts of modern times.

"The remedies for these are restraint, control, and medical treatment of the victims, by legal enactments, prohibitory and coercive. It is also evident that vast ranges of unknown causes and conditions, which enter into the phenomena of life and living, are the basal factors of drunkenness and inebriety. Remedies — legislative, social, and medical — to be effectual must be founded on some general knowledge of

these causes. Such are some of the general facts of the drink problem as seen to-day. Many of them are very significant, and have a meaning which is unmistakable.

"The great revolutions of theories concerning alcohol and its physiological action on the body, together with the rapid accumulation of evidence contradicting all previous conceptions of its value as a nutrient, stimulant, and beverage, are conclusive that the facts are not all known. Countries and cities where wine and beer and other alcoholic drinks have been used freely, without question, are invaded by temperance and total abstinence societies. Theories of the value of spirits that have come down unquestioned are being challenged and proof of their truth demanded.

"The French National Temperance Society, the Society against the Abuses of Alcohol for the Rhine Provinces, the Belgian Total Abstinence Society, the Netherland Society, the Swiss Society, the Italian Society, the Austrian and Prussian Society, the Norwegian, Russian, Danish, and numerous other societies, are urging total abstinence theories, and denying the value of spirits in the very centers of all spirit-drinking countries. Four international congresses have been held in these countries during the past ten years, in which eminent medical men have presented and defended the total abstinence side of the drink problem.

"The real facts, separated from all partisan sensationalism, agree that alcohol is a poison, a paralyzant, and narcotic, and its defenders admit this as true, but only in large and reckless quantities. The question then turns on what quantities are safe or dangerous, and what is the possible amount that can be taken within health limits. This is similar to drawing boundary lines between twilight and darkness, and is obviously impossible with the present limits of our knowledge.

"The evidence up to this time from the chemical laboratory, from experiments, from hospital studies, from statistics, and other sources, clearly proves that alcohol is a poison and is positively dangerous to health — in what way, in what conditions, and under what circumstances is yet an open question, in which difference of opinion will exist until more exhaustive

experimental studies are made. Text-books for schools and colleges and partisan discussions often contain statements conveying the misleading impression that the facts about alcohol are known, when, in reality, beyond a few general principles, we are profoundly ignorant of its physiological action. The facts concerning its ravages and baneful influence are too common to be called in question, and the statement that it is the greatest peril to modern civilization has a basis in actual experience.

"It appears to be a conclusion, which all scientific and sociological progress is verifying, that a more complete knowledge of alcohol will demand some form of prohibitory laws; whether like those existing at present or not it is impossible now to say. Such laws will not depend on any sentiment or any theory, but will be founded on demonstrated truths, and the necessity for self-preservation. It will not be a question of Maine law, or whether prohibition prohibits, or whether any party or society or public sentiment favors or opposes it. Action will be taken on the same principle that a foul water supply is cleansed or a sanitary nuisance removed. The questions of high or low license, local option, and all the various schemes of partial or complete restriction, with the vast machinery of moral forces that seek relief by the church, the pledge, the prayer, and the temperance society, will be forgotten, and the evil will be dealt with in the summary way in which enlightened communities deal with other ascertained causes of dangerous disease.

"While the average citizen may be slow to unlearn and change his views about alcohol, he is ever quick to recognize and provide for dangers that peril his personal interests. Show this man that every place where spirits are sold as a beverage is a "poison center" and every drinker is a suicidal maniac, whose presence is dangerous to the happiness and peace of the community, and he will at once become a practical prohibitionist. This is the direction toward which all temperance agitation is drifting.

"Sanitary boards, government commissions, and hospital authorities must gather the facts from very wide sources, and

the generalizations from these will supplement and sustain the laboratory and hospital work and point out conclusions that will be real advances in this field. Inebriate asylums (at present obscure and bitterly opposed) will become very important aids in the study of the causes of inebriety. Like prohibitory laws, they will become a recognized necessity when the disease of inebriety and the poison of alcohol are understood.

"Beyond all theory and agitation there is another movement of startling significance. Everywhere the moderate and excessive drinking man is looked upon with suspicion. His capacity is doubted, and his weakness is recognized as dangerous in all positions of trust and confidence. Corporations and companies demand employes to be total abstainers. Railroads, manufactories, and even retail liquor dealers of the better class require all workmen to be temperate men. This is extending to all occupations, and the moderate drinker is being crowded out as dangerous and unfit. This movement has no sentiment, but is the result of experience and the recognition of the danger of the use of alcohol as a beverage. Nothing can be more absolute than these unwritten prohibitory laws which discharge workmen seen in saloons and refuse to employ skilled men because they use spirits in moderation.

"To repeal all restrictive and prohibitory laws and open the doors for the free use of rum is to act in opposition to all the facts of observation and experience. On the other hand, to insist that prohibitory laws are the only measures to correct the drink evils, or that high license and local option are equally powerful as remedies, is to assume a knowledge of alcohol and inebriety that has not been attained. The highest wisdom of to-day demands the facts and reasons for the use of alcohol, and why it should be literally and theoretically the cause of so much loss and peril to the race. All hope for the future solution of these questions must come from accurately observed facts and their teachings, and, like the problems of the stars above us, be determined along lines of scientific inquiry."

THE LATE DR. ALBERT DAY.

By L. D. Mason, M.D.,
Brooklyn, N. Y.

One by one the pioneers of our work — the advance guard that has hewn a path through a wilderness of ignorance and prejudice, and established on a firm foundation the principles of our association — are taken from us — Turner, Parish, Mason, Parker, and others — and now our late friend and associate, Dr. Day.

It may be truly said of these men they have labored, and we have entered into their labors. One marked feature of their lives was the pure, unselfish desire that actuated them, namely, to assert and demonstrate the curability of inebriety as a disease. To this end, no sacrifice was too great. Time, health, wealth, and talent were alike poured out like water, if it need be, to establish this principle.

When we look out on life and see the small men who attach themselves to any cause simply for the remuneration it will give them, we compare them to the leech that infests our ponds, or to the barnacle that clings to and fouls the bottom and retards the onward motion of many a mighty ship.

How the lives of men like our late friend shine out when the motive of their life-work is scrutinized, analyzed, and demonstrated! It is like the leading air in a beautiful symphony — blending with all other sounds in perfect harmony, and yet predominating above all.

It is the principal figure or object in the painting that is in perfect accord with its surroundings, but which alone gives value and force to the subject.

Who can impute the motive of such lives, or interpret that motive, except on the highest grounds of self-consecra-

tion, self-abnegation, and the absence of selfishness in any form?

Such was the life of Dr. Day.

To encompass in a brief sketch a life of over 70 years — connected as it was with the direct and collateral issues of the temperance cause in all its phases — would not be possible except in a full and complete biography, which will appear in due time; but it may not be out of place, and in some measure place him before us, if we give his brief autobiography as he gave it to those who assembled to do him honor on the occasion of the celebration of his seventieth birthday, held at the Washingtonian Home, October 15, 1891, at Boston:

"To give a detailed history of my past life would far exceed both my time and your patience, and, on the whole, be hardly necessary, as it would be almost a history of the temperance cause from its inception to the present moment, to which my whole life has been devoted. There are a few facts connected with my early life which but few are acquainted with, and these I will mention.

"I was born in the town of Wells, Maine, in 1821; consequently I am now seventy years of age; and since the time when I became old enough to form opinions, and act in accordance with my own judgment, I have been an active combatant against the unnecessary use of alcoholic liquors of any description, and utterly opposed to their use as a beverage under any circumstances whatever, never admitting artificial stimulation to be designated as a social amenity, nor the freedom of intoxication as the ease of friendly and sympathetic association, nor the frivolity of drunkenness as the hilarity of joyousness.

"When so young as just to be able to write my name, I was enrolled as a member of a temperance society, and at the age of eighteen was recording secretary of the first total abstinence society formed in the State of Maine. If any of you are familiar with the history of the efforts which have been made by the people of New England against the power

of alcohol, you must remember that here temperance societies and total abstinence societies are far from being identical. My ardor increased with years, and in every place where circumstances occasioned me to become a resident — particularly at Sanford, Maine, and Lowell, Mass. — my influence made an impression. In 1850 I became a resident of Boston, and became identified with almost every true benevolent movement made in the city at that period.

"In the summer of 1857, a small number of gentlemen, citizens of Boston, associated themselves under the name of 'Home for the Fallen,' of which, upon urgent request, I accepted charge; and, without tracing its growth step by step, I will simply state that from this embryo sprang the Washingtonian Home, incorporated in 1859, the pioneer of all kindred institutions. Thus it will be seen that for fifty years I have been an active agent in the temperance cause, during thirty-four of which I have had charge of institutions for the cure of inebriety. I have faith to believe that, in general, my efforts have been appreciated; and that my success has been equal to more than could reasonably be expected, thousands of letters on file in my possession will bear testimony. Much more could be said of personal efforts, experiences, failures, and successes; but I refrain, lest I be charged with egotism."

. . . . . .

"And now, friends, let me say one word more in relation to myself. I have now reached the 'three score and ten' years that the Psalmist allots as the normal measure of human life. My bank account of material wealth is exceedingly small, but I am constantly receiving testimonies of the good will and wishes of those who have been blessed by my efforts, and the institution which I have the honor to represent.

"When I commenced my labors in this field, I was obliged to cultivate unbroken ground and tread unknown paths. Myself, and others who were associated with me, walked by faith alone. We had no precedents to which we

could refer. The way was dark, and the clouds were lowering, but the nature of our work was soon heralded, not only over our own country, but the civilized world; and messages were sent to us to inquire about the nature of the blazing star which had arisen in the East of civilized America. Then people and nations have since established institutions similar to our own, and success has attended all which have been conducted on the principle that was first announced by us, and the work will go on as a great factor in the redemption and cure of those who have fallen by the enemy of our race — intemperance.

"I have treated, during the last thirty-four years, nearly eleven thousand cases of inebriety, most of whom had descended low in that path; and they have represented all classes of society — from the presidential mansion to the lowest hovel or habitation — and have embraced national senators and representatives, judges of our courts, lawyers, physicians, clergymen, and, in fact, there is no calling, high or low, whose representatives have not been under my care. Had I time to give personal histories of cures, I could prove the saying that truth indeed is stranger than fiction.

"I will now say, in closing this somewhat lengthy address, that should I, 'by reason of strength, reach four score years,' I shall continue my work even to the end."

At this meeting it was the privilege of the writer in common with the members of the "Association for the Study and Cure of Inebriety" to extend the hand of fellowship to Dr. Day, and congratulate him on the success he had achieved in his life work. He seemed then in as good physical and mental vigor as is often attained by one of his years, and before him, as we thought and as he thought, there were yet years of active labor in the cause to which he had devoted his life. There was not a prolonged illness; death laid its hand upon his heart and it ceased to beat. He passed away on April 27, 1894. Surely it is no poetical fancy to say with such an instance before us —

"There is no death! what seems so is transition;
This life of mortal breath
Is but a suburb of the life Elysian,
Whose portal we call Death."

Mourning friends—physicians, clergymen, lawyers, business men, and many he had saved from a drunkard's life and death, gathered around the body of our fallen friend, and in the silent lineaments of death saw reflected the peace of one at rest.

In temperament Dr. Day was naturally cheerful; we generally saw him with a smile on his face. He was by no means phlegmatic, nor was he over sanguine. His was an even temperament, and he had himself under control. It may be this valuable characteristic of temperament enabled him to bear the fret and worry of many years of uphill controversy that must have necessarily beset his path. But it was not a mere optimistic view of life that sustained him. Let us hear again his own testimony:

"In contending earnestly against intemperance, we have the help and friendship of Him who is Almighty. We have allies in all that is pure, rational, divine in the human soul; in the progressive intelligence of the age; in whatever elevates public sentiment; in religion, in legislation, in philosophy, in the yearnings of the parent; in the prayers of the Christian; in the teachings of God's house; in the influence of God's spirit. With these allies, friends, helpers, let good men not despair; but be strong in the faith, that, in due time, they shall reap if they faint not."

The "hidden springs of comfort" from which Dr. Day drew not only his inspiration but his endurance, were of a high religious order; he was eminently a Christian. It was not an arm of flesh on which he leaned, but the arm of his Heavenly Father was round about him and sustained him. This was the source of his cheerfulness, the hidden spring of his comfort and courage. With apostolic firmness he could face all difficulty and say, "If God be for us who can be against us."

The character of Dr. Day must have included charity, tenderness, forbearance, and a strong humanity; it did include all these, for these characteristics led him up to his work and sustained him in it. His philanthropy extended to the lowest grades of degenerated manhood, and made him an uplifting force, and he did his work cheerfully, genially, and with an almost seeming unconsciousness of self.

> "Howe'er it be, it seems to me
> 'Tis only noble to be good;
> Kind words are more then coronets,
> And simple faith than Norman blood."

Dr. Day as a member of our association, and as our chief officer was most loyal and active to our cause and to the standard under which he fought. With him there was not any compromise, and he did not desire to compromise. He was heart and soul in the work, and his addresses, written and spoken, and his printed articles as well as his private conversation, all attested that to him inebriety was a disease, and that it was through medical treatment that the inebriate must be relieved. As an asylum physician of thirty-four years' standing, Dr. Day firmly believed in this method as the only satisfactory one that answered the question, "How shall we treat the inebriate?"

It is natural that

> "Like our shadows,
> Our wishes lengthen as our sun declines."

So it may be our fellow laborer would have preferred to live a little longer, perchance to see the capstone placed on the climax of his hopes, and yet he must have had a vision of the glorious temple of his desires rising in all its beautiful proportions in the horizon of the twilight of his life. There is a point in some lives where heaven and earth seem to blend, and it may be that if our friend did not enter into the promised land of the full realization of his life-work, nevertheless we believe the vision of the result of that life was not withheld from him, and the solution of the problem of it and its fulfillment was assured to him.

The volume of his life-work is closed, the volume of his eternal life is opened; the spirit of a just man is made perfect. In the strength of such a life let our lives be made stronger. Let us take courage and re-enter the battle of life with renewed zeal. "With malice towards none, with charity for all, with firmness in the right, as God gives us to see the right," let us, as did our worthy co-laborer, maintain the doctrines we profess.

WHEREAS, God in His providence has seen fit to remove by death from our midst our late associate and president, Dr. Albert H. Day,

Resolved, That as members of the "Association for the Study and Cure of Inebriety" we deeply feel the loss that our society has sustained in the sudden death of our presiding officer.

Resolved, That we desire to bear testimony to the invaluable aid that he rendered our association in his mature judgment and wise counsels.

Resolved, That we tender to the family of our late associate our heartfelt sympathy in this their time of bereavement.

Resolved, That a copy of these resolutions be sent to the secular and medical press, and be printed in the JOURNAL OF INEBRIETY, and such other journals, both American and foreign, as may represent the specialty of inebriety.

Resolved, That a copy of these resolutions be properly engrossed and sent to the family of the deceased.

THE Temperance Reform League of Massachusetts have received a special charter to treat inebriates on a new plan. A committee has reported "that an hospital be established in which convenience of location and arrangement may admit the application of such psychical treatment of inebriates as has already given admitted evidence of efficacy." This will no doubt include hypnotism, mind and faith cures, and its workings will be watched with great interest by many persons who are looking for the unknown.

Abstracts and Reviews.

HOME FOR THE CURE OF INEBRIATES, SAN FRANCISCO, CAL.

The annual report of this noted asylum by the well known medical expert, Dr. Potter, who is superintendent, is before us. The following extracts will be of great interest to our eastern readers and show how much good work is being done on the western slope in this new field of study.

On January 1, 1893, there were 24 cases in the House, and during the year there were 1,026 admitted, making a total of 1,050 cases treated, of which 705 were admitted for alcoholism, 328 for insanity, 102 of which were alcoholic cases, 13 for morphinism and cocainism, and 5 for bromism, insomnia, etc. As many of the alcoholic cases were readmissions, of the same persons, in some instances several times during the year, the actual number of individuals under this heading was much less, namely, 437. These numbers are exhibited in detail in the following table:

TABLE OF INDIVIDUAL CASES ADMITTED.

Admitted for	Remarks.	Males.	Females.	Total.	Aggregate.
Alcoholism..... (705 Admissions)	Admitted once only	156	27	183	.....
	" 2 to 3 times	112	18	130	.....
	" over 3 times	119	5	124	437*
Insanity (328)†	Com'ted to asylums	129	43	172	.....
	Discharg'd by Court	115	19	134	.....
	" by Supt.	21	1	23	328†
Morphine and Cocainism.....	....	8	5	13	13
Bromism, Insomnia, etc.....	....	4	1	5	5
	Totals, ...	664	119	783	783

* Of these 36 had delirium tremens when admitted.

† Of these 102 had delirium tremens when admitted.

Besides the 437 individual cases of alcoholism, 102, or more than one-half of the cases of insanity discharged by the court, were cases of the same kind, but who, being in delirium tremens, were supposed to be insane when arrested. These added to the others gives a total of 807 admissions, or 539 individual cases of alcoholism altogether, of which 102 plus 36, or 138 in all, were in delirium tremens when received.

Among these cases it will be observed that 183 plus 102, or 285, were persons who had never been in the Home before, and who have not returned thereto since. It may be assumed that very few (or none) would be brought here for a first "spree"; hence nearly all our cases may be considered as victims of the alcohol habit, making all due allowance for those who have left the city; and for those who have continued drinking, though not to such an extent as to require to be replaced under treatment here, it may reasonably be assumed that a large proportion of this number (285) have remained free from drink as a result of their treatment and detention in this institution. It is quite impossible to follow up these people, in so changeable a community as this, to ascertain the results in their cases; but a few notable ones, personally known to some of your honorable body, as well as to myself, may be mentioned in detail.

Morphine and Cocaine Cases.— Of the thirteen persons admitted on account of these habits four stayed only a few days,—not long enough to accomplish any results. Two were entirely free from the combined habit when discharged, but went back through evil associations; two are yet in the House, and five were discharged cured, of whom three are known to have remained free from these drugs ever since, while the results in the other two cases are unknown. One of these is a physician using twelve grains of morphine and forty-eight grains of cocaine daily, by the hypodermic syringe, who, when admitted, was insane from his abuse of these drugs. He was entirely free from both in three weeks, and was discharged at the end of a month, sound in mind and

body. Another, a young man of good family, had used from ten to twenty grains of morphine daily for six years, and had commenced the use of cocaine. He remained five weeks in the House, and was discharged in perfect health. He called on me lately, looking well, and stated that he had never touched either drug since.

The method of treatment adopted here for morphine cases is that of very gradual reduction of the drug, and at the same time the gradual substitution of sedative treatment by other medicaments according to the requirements of each individual — some requiring very little medication indeed, others a great deal. This method gives but very little suffering in any case, confined to a slight diarrhœa and some restlessness and insomnia, all of which are easily controlled. The patient is not allowed to know anything about the rate of reduction or the remedies used, and all medicine is given by the mouth, the syringe being dropped from the first. There is no difficulty in curing the worst case of morphine habituation without suffering, provided sufficient time is given to do the work in. It can be done in five or six weeks, but a period of two months is the least which ought to be devoted thereto. The danger is in going out into the world too soon, before sufficient tone has been acquired by the nervous system to enable the patient to withstand temptation. Those who go back to the habit after a thorough course of treatment are nearly all persons of low associations, who resort to opium joints, and consort with other habitués. Unless they break away entirely from such surroundings they are certain to resume their former condition of drug-slavery.

Alcohol was used in the treatment of only three cases during the year, none of which recovered. They were two worn-out cases of general debility, and one friendless, half-starved outcast admitted in delirium tremens. Every case of delirium tremens in which no alcohol was used recovered. From statements made to me by patients who had previously gone to general hospitals for treatment for inebriety, I am satisfied that the policy of this House is the correct one,

namely, to give no alcohol ordinarily in the treatment of acute alcoholism. The patients themselves say that recovery is quicker and with less suffering under this system; and that the method of "tapering off," pursued in some hospitals, simply "prolongs the agony," or, in the words of others, makes it a "terrible long time between drinks." The influence of the mind over the body is so great that the knowledge that liquor *can* be had as a part of the treatment invariably induces an overwhelming desire for it; while, on the other hand, the certainty that none will be given under any circumstances operates to sustain the nervous system in the fight for recovery.

The deaths during the year were only five in all, of which but one was from alcoholism directly,—a friendless, homeless outcast, who had been greatly neglected and half-starved before admission. Of the others, one (a woman) died from acute mania, one from heart disease, and two from general break-up of the system, both the latter having been placed here in a dying condition by friends who desired to furnish them a place to die in. Hence, in 705 alcoholic admissions, and 102 charged with insanity, but found to be in delirium tremens, making a total of 807 alcoholic cases in all, of which 138 were in delirium tremens, there was but one death. This is a remarkable showing, considering the large number of cases received in delirium tremens and the bad physical condition of the great majority.

The report of Walnut Lodge Hospital of Hartford, Conn., for 1893 contains the following:

The whole number of cases treated during the year have been fifty-seven. Of those discharged, sixteen are recorded as recovered, all of whom have gone back to their former places in business and society with every prospect of permanent restoration. Twenty-one were discharged as greatly improved and practically recovered, and able to go out with a fair degree of health, and begin a new career

of changed life and living. In this class are the dipsomaniacs and periodical drinkers, who are likely to relapse from any special strain or drain on the nervous system, or any special exciting causes. In this class are persons who will neglect to keep up the degree of mental and physical vigor which they have acquired under treatment, becoming reckless and over-confident, and thus fail; others will make a permanent recovery. Eight cases were markedly benefited, although considered incurable and remaining but a short time. Four cases were insane, and the treatment simply unmasked the real symptoms and character of the case. In view of the fact that the usual time of treatment is always inadequate for full restoration, the results are very hopeful.

Six women were under treatment during the year. In three the inebriety began at the change of life, and was associated with nervous exhaustion. They made a good recovery. Two began the use of beer and finally spirits for menstrual troubles, and only used it at these periods. One was a pronounced paranoic with delusions, who used spirits as a medicine on all occasions of distress. A new feature in the history of patients this year is the number of persons who have taken the various *Gold Cure Remedies* and relapsed. The number of this class received during the year were thirty-one. Compared with others who had not used these secret remedies, they were more degenerate, depressed, and irritable. In treatment they recovered more slowly, and suffered more prominently from insomnia and hallucinations.

In the study of the history of cases of inebriety, remarkable examples of heredity and of the operation of physical laws constantly appear. These cases are often great problems, in which the facts are not known only in a very general way. But they present the clearest evidence possible that inebriety is a condition governed by laws and forces which move along lines fixed and unchanging. No treatment can promise any results unless it is founded on a study and knowledge of these laws, and along the lines of physical forces.

Of the thirty-two cases of heredity, eleven gave a history of moderate and excessive drinking parents. In fourteen cases grandparents on both sides were inebriates, and also other members of the family. In two cases all the male members of the family for three generations had used spirits to excess. In one case, the male members for two generations began to drink at a certain time of life and abstain at another definite date. These periods in five persons were more or less exact, only varying a few months in the origin and termination. In three cases the parents of the third generation back had been inebriates, and the heredity passed over two generations, breaking out in two cases after the hardship of army life; in another case without any special exciting causes.

The term *traumatism* includes all cases where injury has been followed by the use of spirits. Such cases have a history of blows on the head, sun or heat stroke, severe injury to the body, and profound mental shocks, in most cases of which periods of unconsciousness and mental delirium have followed. Six of these cases were evidently temperate men up to this time, and began to drink dating from this event. In one case an old fracture which had healed with extensive bony growths that pressed on the nerves, was followed by inebriety. In two cases a history of acute gastritis and enteritis preceded the drink craze.

Exhaustion as a cause describes a class of cases preceded by profound anæmia and general debility, also states of cell and tissue starvation.

Environment appears to be an active cause in a small number of cases, but when other predisposing conditions are present, it is a very influential factor.

Inebriety follows a consumptive, rheumatic, and hysteric diathesis, and in a certain number of cases is clearly a symptom of paresis, dementia, and melancholia. Syphilitic brain degeneration has often a drink period which is overlooked and misunderstood. Nearly all cases of inebriety present combinations of causes, which are with difficulty traced to

find the central and leading one. Among these may be mentioned nutrient, psychical, hygienic, sociological, cosmical, and other causes. Spirits in most cases is simply the match to explode and concentrate an accumulation of degenerative influences which have been forming in the past. These cases may be grouped into certain forms, as in the following table:

Periodical Inebriates,	22
Constant Inebriates,	15
Irregular Inebriates,	9
Spirits and Opium alternately,	5
Cocaine Inebriate,	1
Chloral and Spirits,	1
Opium Inebriety,	2
Dipsomaniacs,	3

In this grouping the periodic cases, with their distinct free intervals of sobriety and drink paroxysms, are the most interesting. In some cases the length of this free interval and the return of the paroxysm can be predicted with almost mathematical certainty. These cases have many points resembling epilepsy and other paroxysmal neuroses. The dipsomaniacs with an overpowering impulse or mania for spirits are not very common. The constant and irregular inebriates are usually largely influenced by nutrition, environment, and conditions of ill-health, and also psychical states. The periodic drinkers are those who turn to opium, chloral, and other drugs for relief. Some of these alternate from one narcotic to another until death brings relief. The following statistics are presented:

AGE OF PERSONS UNDER TREATMENT.

From 20 to 30 years of age,	10	From 50 to 60 years of age,	4
From 30 to 40 "	29	From 60 to 65 "	1
From 40 to 50 "	13		

SOCIAL CONDITION.

Married, living with wife,	22	Widows,	3
Married, and separated from wife,	15	Single,	9
Widowers,	8		

OCCUPATIONS.

Expressmen,	2	Watchmaker,	1
Merchants,	3	Railroad Clerk,	1
Lawyers,	6	Speculators,	2

Judge,	1	Gardener,	1
Liveryman,	1	Reporter,	1
Brokers,	3	Drummers,	3
Hotel Keeper,	1	Importers,	2
Physicians,	4	Undertaker,	1
Engineers,	2	Farmer,	1
Railroad Officials,	2	Restaurant Keeper,	1
Manufacturers,	3	Capitalists,	2
Clerks,	3	Women:	
Machinists,	2	Housewives,	3
Lumberman,	1	No occupation,	2
Clergyman,	1	Teacher,	1

DURATION OF THE INEBRIETY.

Less than five years,	6	From fifteen to twenty years,	8
From five to ten years,	17	From twenty to twenty-five years,	3
From ten to fifteen years,	21	Over twenty-five years,	2

EDUCATION.

Collegiate,	16	Academic,	24
University,	4	Common School,	13

LIQUOR-HABIT CURES.

A paper on this subject by Professor Cosgrave, of the Royal College of Surgeons, Ireland, appears in the *Medical Press and Circular*, and is a timely exposure of, and warning against, the nostrums, hailing mostly from the other side of the Atlantic, on which the victims of the drink crave and their friends spend uselessly large sums of money. The condition of things which provides a market for the drink cures of the quack is one that indicates a limited, if not a defective, intelligence. But it is not difficult to trace the process by which the market has been provided; and then the supply comes in response to the foolish demand; the fools are answered according to their folly, and — victimized. Let us briefly note how the market for drink cures has been created.

The study of inebriety is daily demonstrating more clearly that the condition expressed by the word is a condition of disease. The significance of that teaching is fully recognized by total abstainers. It is recognized by them as an argument which adds greatly to the cogency of every other consideration by which men and women are in-

duced to abstain; and also as an argument which may be influential in quarters where moral considerations have little weight. In no condition of life is health despised. It is true now, as in the days of Job, that "all a man hath will he give for his life." But the large majority of the people in this country continue the use of strong drink, which is known to impair health, and thus seem to prefer having their life preserved through being cured of disease to having it preserved by the avoidance of disease. We do not say that in so many words they would acknowledge this to be the principle upon which they act; but we give this as an expression in words of what their conduct signifies. The experience of total abstainers has long ago proved that abstinence is conducive to health. But drinkers prefer not to be convinced by such testimony.—*Editorial in Temperance Record.*

The men of science are now proving that the use of alcohol impairs health and produces disease, and so shortens life. But as the avoidance of that disease involves the one thing which drinkers are resolved not to do, *viz.*, abstain from alcohol in every shape and form, a cry goes up from them for a cure, and the "cures" are supplied by the empirics. The drinkers prefer the hope of being saved by a "cure" to the certainty of being saved through the abstinence that avoids the disease. Folly and credulity generally go together, and the knave finds his profit in the credulity that is born of folly. And so it comes about that the cry of the fools is responded to by the knaves.

But while all this is true, and the fools might really be left to reap the reward of their folly, Professor Cosgrave has done well in exposing the quackery of some of the so-called "cures." And in doing so he lays down some principles which it is of the greatest importance should be circulated far and wide. He says: "One way in which we can do good is by letting it be known that while inebriety is to a great extent a disease, it is not a disease which any specific can cure." And then he goes on to say that "the rational

method of treatment of the inebriate is to enforce absolute abstinence and to try and build up the system to a condition of health." The conclusions of a man of such experience and attainments as Professor Cosgrave are not to be lightly or heedlessly thrust aside.

SANITATION PRACTICALLY.

Mr. Willis Barnes, a lawyer of eminence in New York city, has an excellent article on this subject, in which occurs the following on the alcoholic traffic, which —

"Causes physical influences which places the human body in a receptive condition favorable for the development of insanitation, disease, and death.

"Causes influence upon the brain and nerve tissue which produces insanitation, insanity, mental diseases, and death.

"Causes a lowering of moral tone, which disregards well-known laws of sanitation.

"Causes crime, sorrow, grief, mental worry, waste of money, property, physical and mental strength, which in turn lowers social status, defeats home comforts, and creates environment, which promotes insanitation.

"Causes physical and mental taint in parents which is reproduced in offspring.

"Causes conditions which make it necessary to establish hospitals, poor-houses, and jails, all evidence of the existence of insanitation in the community.

"Laws are passed empowering boards of health to take action for the protection of communities against all classes of disease save that of alcoholism. This disease goes on unchecked by law. There is no quarantine for the alcoholic.

"He or she may disseminate their poisonous diseased germ upon untold thousands, but not one word of legal control is raised to stem the current of this iniquity upon innocent infancy.

"Alcohol creates more mental and physical disease,

more mental and physical suffering, than all other diseases put together.

"The disease — alcoholism — is more infectious, more contagious, and should receive more strict quarantine than all other known diseases. Alcohol not only creates mental and physical deterioration, but it stamps disease upon the body politic and engenders poverty, waste, and loss of everything necessary to promote the welfare of communities. The alcoholic traffic is a curse upon the resident of the farm, the village, and the town, and produces influences which cause insanitation of the most pronounced character."

CHILDREN OF DRINKERS.

A distinguished specialist in children's diseases has carefully noted the difference between twelve families of drinkers and twelve families of temperate ones during a period of twelve years, with the result that he found the twelve drinking families produced in those years fifty-seven children, while the temperates were accountable for sixty-one. Of the drinkers, twenty-five children died in the first week of life, as against six on the other side. The latter deaths were from weakness, while the former were attributable to weakness, convulsive attacks, or to œdema of the brain and membranes. To this cheerful record is added five who were idiots, five so stunted in growth as to be really dwarfs, five when older became epileptics, one, a boy, had grave chorea ending in idiocy, five more were diseased and deformed, and two of the epileptics became by inheritance drinkers. Ten, therefore, of this fifty-seven, only, showed during life normal disposition and development of body and mind. On the parts of the temperates, as before stated, five died in the first week of weakness, while four in later years of childhood had curable nervous diseases. Two only showed inherited nervous defects. Thus fifty were normal, in every way sound in body and mind.

SALOON STATISTICS.

The census department at Washington have brought out some very interesting statistics concerning saloons of the country. In 345 cities, whose population exceeded 10,000, special inquiries were made. 257 of these cities report having saloons; 40 have no saloons, and 48 are silent and make no report. In these 257 cities the population was, in 1890, 15,316,167, and the number of saloons 61,336, an average of one saloon for every 250 persons, including men, women, and children. The distribution of saloons varies widely, from one saloon to every 69 persons in Atlantic City, N. J.; one to 72 in Lexington, Ky.; one to 79 in Butte City, Mon.; one to 2,141 in Northampton, and one to 6,236 in Waltham, Mass. In cities of over 100,000 the range is from one saloon to every 103 persons in San Francisco, and one to every 128 persons in Buffalo, and one to 1,728 persons in Worcester, Mass., and one to every 1,491 persons in Lincoln, Neb. In Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, and some other western States, the saloons are most numerous to the population. In Kentucky, Tennessee, Alabama, Mississippi, Louisiana, Texas, and Arkansas, the saloons are the least to the population. These figures give some idea of the extent of one of the greatest evils of the times.

DISCUSSION ON COCAINE.

In a report made to the "Société de Chirurgie," by Dr. Reclus, of a case of death due to the careless employment of cocaine, he asks if the rules which regulate the administration of this valuable anæsthetic are sufficiently familiar to the medical public. Dr. Reclus's report, and the discussion which followed, are well calculated to continue our doubts upon this subject. He cited a case of a man, seventy-two years of age, affected with arterio-sclerosis, in whom a physician, with the view of facilitating catheterism, injected

into the urethra 20 grammes of a five per cent. solution of cocaine. Death immediately ensued, and the operator was so astounded by the result, that he thought it his duty to report the case to the Surgical Society, at the same time insisting that he administered a moderate dose of the cocaine. To him M. Reclus responded by saying: "You ought rather to say a foolish dose." Those most experienced in the daily use of this alkaloid, agree with M. Reclus that it should be employed according to certain inflexible rules. The solution for hypodermic injections should be from $\frac{1}{100}$ to $\frac{2}{100}$ at the utmost. Stronger solutions should never be used; and surgeons, generally, are unanimously agreed upon this point. The accidents that supervene are invariably due to too strong doses. This particularly applies to hypodermic injections. A solution of cocaine applied to a mucous surface is more or less rapidly absorbed, according to the nature of the mucous membrane, in view of its special physiological properties. In the case reported the mucous surface was that of the urethra, which, in all cases, absorbs more rapidly than that of the bladder, and, moreover, consideration should be given to the possible raw surfaces of the canal in its narrow or prostatic portions. Dubuc operated in five cases of lithotrity, after injecting 30 grammes of a solution of five per cent. into the bladder, when inflamed, and ten into the healthy bladder. — *Medical Times.*

INTENT AND CRIME.

Intent is one of the essential elements to many crimes. What constitutes intent is often a very difficult question to determine. It is one more than merely legal, though the law may lay down rules with respect to it and governing its application to crime. There is no human gauge by which the duration of intent can be measured, says the Supreme Court of Louisiana, in the case of State *vs.* Ashley, decided at its July (1893) term (13, *Southern Reporter*, 738).

If killing has been done with the malicious intent to kill, the case is one of murder, although that malicious intention was formed at the moment of striking the fatal blow. Therefore, it does not necessarily follow that a homicide is not murder because done in sudden passion. There are many cases where that fact would entitle an accused neither to an acquittal nor to a verdict of manslaughter. And a charge to a jury which assumes that drunkenness is so inconsistent with malice that, when shown to exist at the time of the killing, it becomes the duty of the State to seek for the latter at a period anterior to the drunkenness, and to show affirmatively that the drinking was for the purpose of committing the deed, is palpably false.—*Lancet-Clinic.*

The American Medical Association, at San Francisco, was noted for several papers on Inebriety and Morphinism by Drs. Crothers, Hughes, Mattison, and others. In the section of neurology and medical jurisprudence, Dr. Gavigan of San Francisco offered the following resolutions, which were adopted after some very interesting remarks:

"WHEREAS, in view of the fact that the problems concerning the care and treatment of inebriates have become a practical necessity in every part of the country, therefore be it

"*Resolved*, That we earnestly urge and advise the establishment of special asylums for the care and treatment of habitual drinkers in each State of the Union.

"*Resolved*, That such asylums be organized by the State as industrial homes where each person can be placed under restraint, medical care and treatment for a sufficient length of time to permit of a full restoration.

"*Resolved*, That the time has come for means and measures based on scientific experience to gather and control the habitual inebriates and thus avert the danger and peril to public health, and lessen the burden to society which comes from this source."

MEDICAL TEMPERANCE ASSOCIATION.

The fourth annual meeting of this association at San Francisco was of more than usual interest in the character of the papers read. Both President and Vice-President had excellent addresses. The prize committee reported a paper worthy of prize, on "Spectroscopic Studies of the Blood of Persons who had used Spirits." Dr. Kellogg, the chairman of committee on original studies, reported in a paper of much merit. Dr. Crothers read a paper on "Bad Air in Inebriety."

Resolutions were passed enlarging the scope of the membership and giving the JOURNAL to all who paid the regular membership due. Nineteen new members were reported during the year, and altogether a very encouraging outlook for the future was presented. The meeting drew together a number of persons who discussed the topics presented very intelligently.

The old officers were re-elected, and Dr. Kellogg continues his prize offer of one hundred dollars for the best essay "On the Non-Alcoholic Treatment of Disease."

THERE can be no question that every thought and action leaves its impress on the individual cell and in some way modifies its action, and its chemical and physiological properties. The use of alcohol or any drugs that seriously affect protoplasm must change the organism in many ways. The continuous poisoning by opium or alcohol must of necessity modify the delicate nerve processes, and change the natural health and vigor of the organism.

In the Thirty-Sixth Annual Report of Washingtonian Home, Boston, Mass., the Superintendent, Dr. Ellsworth, remarks as follows:

In this broad land to-day there is no disease more prevalent than inebriety, and none less seldom understood. In fact, the recognition of inebriety as a disease is only recently confirmed, although it has been asserted as a theory for a thousand years. The common idea that intemperance

is but a vice, a breach of the moral law and a sin against God, must slowly give way before the enlightenment born of modern scientific investigation. There are few families in the United States which have not had at least one relative who has been the victim of intemperance. How very important, then, that there should be a clear understanding of the real nature of inebriety, and that we employ such means of cure as medical science and experience indicate. The peculiarities of each case must be taken into account, as what would suit one most admirably would not be adapted to another.

The disease of inebriety is a disease which requires the utmost skill and care in treatment, to build up the shattered nervous system, restore the lost will power, and remove the craving for alcohol. The same can be said of the opium and chloral habits. I believe the permanent cure of these diseases can only be accomplished by attention to fundamental therapeutic laws, and not by patent nostrums or select remedies. Various alcoholic disorders which may affect the inebriate call for special treatment. Inebriety should be considered as one of a group of nervous affections, as a constitutional disease of the nervous system characterized by a strong morbid craving for intoxicants. Never before in the treatment of nervous and mental diseases, in inebriety and the morphia habit, have we been able to treat them so exactly, and obtain such certain and permanent results as we can to-day.

While patients are constantly under medical supervision, and are cared for by trained nurses, supplementing this care are the strong moral, and other fortifying and unlifting influences, to insure a permanent reform in their habits. It is of the highest importance that firmness and perseverance in the paths of rectitude be sedulously cultivated. Every influence tending to aid in this consummation is a remedial agent urgently called for. It is my plan to stimulate in the patient self-effort, to strengthen his physical and moral nature, to surround him with all the refining and ennobling influences

of a true home. For many years we have had, at intervals, epidemic waves of temperance work. All the various methods help to rouse public sentiment and to bring out the facts as to the disease of inebriety and its curability. There is no doubt that a certain number are restored by each method. I am friendly to each and every method that promises relief. My greatest aim and desire is that the good work of the "Home," born of the great Washingtonian movement, shall continue, and be even more productive of good in the future than it has been in the past.

A new feature in the history of patients this year is the number of persons who have taken the "Gold Cure" remedies and relapsed. The number of this class of patients received in this institution during the past year was twenty. Compared with others who had not used these remedies, they were more depressed and irritable, and, under treatment, they recovered more slowly.

One hundred and fifty cases have been under treatment during the year.

Number of delirium cases treated during the year was fifteen; all recovered.

Six patients who were sent here for treatment proved to be insane. The treatment unmasked the symptoms and character of each case. One was paresis, three were dementia, and two were melancholia. Two are now in an insane asylum, one committed suicide, one is yet under treatment, and one is unrestrained in his family at home. The case of paresis died soon after being admitted.

Dr. E. C. Fownes of New York recently died from general paralysis, associated with low muttering delirium. For twenty years he has used large quantities of coffee daily, made as strong as possible. He was a coffee inebriate, and for years remained in seclusion, in charge of a nurse, having no wants or troubles except to procure his usual quantity of strong coffee.

KINGS COUNTY INEBRIATE HOME.

The twenty-sixth annual report of the Inebriates' Home at Fort Hamilton, New York, for 1893, contains some very interesting statistical facts. There were admitted during the year 338 cases, with the 152 at the beginning of the year, making in all treated during the year 490 cases. At the close of the year there were 32 pay patients, and 122 indigent poor sent there by the county. During the year six deaths occurred, and four were transferred to other hospitals, and three hundred and twenty-six were discharged. Of this number 189 engaged in business, and are reported as doing well; 42 are unimproved and relapsed; 46 have been lost sight of and 46 were readmissions; and three have died since leaving the institution.

Of the social condition, 246 were married, 37 were widowers, and 192 were single. 15 women were under treatment during the year. The oldest patient was 80 and the youngest 18 years of age. The largest number of cases were clerks in occupation, 57 in all; laborers came next, 56; salesmen, 20; no occupation, 19; bookkeepers, 17; painters, 15; carpenters, 13; printers and butchers, both 12 each; engineers, 10; merchants, 11. Of the professions, 7 lawyers and 2 physicians, 1 veterinary surgeon, and 1 dentist are all that appear. Liquor dealers number 7 and bartenders 12. The rest of the occupations include almost every form of labor known. The table of ages is suggestive: from 20 to 30, 66; from 30 to 40, 135; from 40 to 50, 153; from 50 to 60, 92; from 60 to 70, 35; over 70, 8.

For over a quarter of a century this Home has received the indigent and worthy poor of the county of Kings by special commitments from the courts. It has also a part of the building appropriated for voluntary cases, who pay for their board and care. Both departments have been conducted with success. The superintendent, Dr. Blanchard, has been for many years in charge, and has become known as a leading specialist in this field. The statistics of this

institution have furnished some very conclusive facts, and settled several important questions in this field. Hence the work of this Home and its prosperity is of unusual interest to all scientific students.

INEBRIETY.

In its closing hour the Ontario Medical Association in convention declared drunkenness not a crime but a disease, and adopted a petition to the lieutenant-governor asking that industrial reformatories may be established by the Ontario government for the reception of dipsomaniacs.—*Toronto World.*

ALCOHOLISM AND BEER.

At the Eleventh International Medical Congress held at Rome, March 29–April 5, 1894, Dr. S. Laache of Christiana, Norway, in an address on the subject, "Idopathic Hypertrophy (enlargement) of the Heart," said:

"Alcoholism is a factor of considerable importance, especially that form seen in beer drinkers, which is, according to the interesting researches of Bollinger, a preponderating cause of so-called idopathic hypertrophy. The plethora provoked by the immoderate ingestion of beer, and the increase of blood-pressure resulting therefrom, furnishes an explanation of the increasing part, disputing the first place even with tuberculosis, which cardiac affections play in the mortality statistics of Munich. The overheart constitutes certainly the sad reverse of the medal. I refer to so justly celebrated Bavarian beer. But at the same time it furnishes a new and interesting aspect of the multiple manifestations of chronic alcoholism."

THE USES OF CODEINE. — Perininger, with a view to observing to what extent codeine could replace morphine, tested it in a variety of patients. The author did not find it successful as a narcotic, only short periods of sleep having

been produced in his patients. When pain was present it only slightly relieved. In cases of tuberculosis its action was analogous to that of morphine, producing the same relief. Similar observations made in patients suffering from bronchitis. Dyspeptic symptoms, sometimes produced by a long use of morphine, were not complained of. Some cases of dyspepsia appeared to be improved by its use. In pertussis its use was followed by excellent results. He concludes by stating that he does not consider codeine to be a substitute for morphine, though in isolated cases it appears to act better.

TEMPERANCE IN ALL NATIONS.—A history of the cause in all countries of the globe, together with the papers, essays, addresses, and discussions of the World's Temperance Congress. Edited by J. N. STEARNS, secretary of the National Temperance Society, and published by this society, New York city, 1893.

This work originally published in two volumes is now combined in one, and sold at two dollars. It comprises about 1,000 pages, and is neatly printed and bound in cloth. This work is a very successful attempt to give an outline view of the temperance work in all countries of the world. Leaders of all the various organized efforts personally write of their labors and success. Two hundred representatives of all phases of the temperance cause present facts, figures, conclusions, statements, and opinions, that are a revelation to the reader. The historical part is a wonderful story of the great oncoming revolution of public sentiment concerning alcohol. It points out clearly the growth and development of the cause of temperance in its highest sense. It shows that alcohol and all its attendent evils are doomed by an evolution far beyond the levels of reformers, and their confident efforts. It is the veritable handwriting on the walls of the present, announcing the passing away of the delusions of alcohol, and the approach of a new kingdom

and new world of thought. The second part, consisting of thirty-four different papers, all of more or less value, has a melancholy interest in the fact that only four physicians are represented. This is of all topics a medical one, and seventeen clergymen, seven teachers, and six women essayed the task of describing the dangers and losses from alcohol.

Ninety different addresses were given at the different meetings, principally on the various topics presented. These speakers struck all the various notes of this evil, and as a whole the medley is confusing, and pitched below the natural levels of the topic. Yet as a picture of the thought of the reformers of to-day, it is intensely interesting. Taken as a whole, this volume should be in the hands of every student of the social problems of the day. To the temperance reformer it is invaluable as a view of the cause and its advocates. To the scientific man it has both a historical and psychological interest, pointing out the signs of the times, and indicating lines of evolutionary race marches, unknown before.

The *Seventeenth Annual Report of the Conn. Agricultural Experiment Station at New Haven* has just been issued. It is a volume of 331 pages, containing papers on fertilizers, feeding stuffs, dairy matters, diseases of fruit trees and vines and other matters of interest to farmers, fruit growers, and dairymen. This report is sent free to all applicants within the State, so far as the limited edition permits.

The Homiletic Review, by Funk & Wagnalls, New York city, is an excellent magazine, and would make a rich present for the pastor of any church.

Few persons realize the wealth of facts that appear in the *Popular Science Monthly* every month. Facts of geology, chemistry, botany, social and sanitary science, and all the entire field of science is presented in outline during the year.

We always watch the weekly issues of the *New York Voice* for facts of practical temperance. No paper gives more reliable facts and statistics.

Editorial.

INEBRIETY AND SYPHILIS.

Instances like the following are not only common, but suggestive of causes and conditions that are not understood. Persons who have been moderate and only occasional users of spirits, after contracting syphilis, become inebriates, generally paroxysmal or periodical, using spirits to great excess, and seldom able to use spirits in small quantities after this infection. It is also noted that a certain number of inebriates, after a short period of excessive use of spirits, become delirious, wildly boastful, and have all the symptoms of paretics; talk and act as if in possession of vast sums of money, and unlimited powers of body and mind. Such persons are rarely quarrelsome or irritable, and these delusions pass away quickly after a sleep. In most of these cases a history of recent syphilis is found, and practically large doses of iodides and mercury seem to be most efficacious as remedies. Some cases of periodical drinking, which approach dipsomania in intensity, are found to recover quickly from the use of mercury and iodides, and the inference is clear that syphilitic poison is an active factor in the causation. In the absence of any extended study of this topic, the clinical impression prevails that syphilis is a very active cause of inebriety, especially in persons who are occasional or moderate drinkers. Such persons, after an injection of syphilitic poison, become inebriates. The symptoms are different from others who are free from this poison. The tendency to psychical delirium is greater, and the paroxysm is associated with muscular trembling and egotistical delusions. The history of syphilis is always denied, but scars and indurated glands negative such statements. The tendon reflexes are often absent, and muscular co-ordi-

nation is disturbed. When the eyes are shut they walk with difficulty, and distinct sections of the body are anæsthetic or hyperesthetic. Symptoms of paresis are common, and pass away after a few weeks' treatment. Mercury and baths are found to be most practical remedies. Some periodical inebriates, whose drink paroxysm comes on with distinct intervals, have been successfully treated by mercury and bark given for a short period before the anticipated attack. The returning drink craze would be simply a period of short depression, rather than the irritation and intense desire for drink common to such occasions. A noted dipsomaniac, whose drink paroxysms were marked by wild gambling and wilder speculations, was cured by a course of the iodides and sulphur baths. How far syphilis complicated or was the active cause it is difficult to say. Inebriates who contract syphilis, after the drink craze has become settled, are more degenerate; and the impression prevails that delirium tremens are more common in such cases. The poison of syphilis is a very serious complication in all cases of inebriety, whether it is an exciting or predisposing cause, or whether it comes in after as a source of additional degeneration, there can be no doubt that it has a powerful influence in such cases. A shrewd quack recently received a great deal of credit for the restoration of a prominent inebriate; the real remedies were iodides and mercury, and the poison of syphilis was the active cause. A very broad field of research is open in this direction.

Dr. Albert Day died at his home, Melrose Highlands, April 27, 1894. He had been suffering from heart disease — principally valvular insufficiency and enlargement of the walls of the heart; yet he was able to be about until the day of his death. A few months before his death he retired from the active charge of Washingtonian Home, and opened a private retreat for a few cases at Melrose Highlands, Mass. Like a true soldier, he died at his post. The unfortunates for whom he had spent his life stood around his death bed,

and watched him silently disappearing over the "outer bar." Dr. Day was an earnest, enthusiastic man, whose personal influence over the inebriates he treated was stimulating and very helpful. No other man had ever seen and treated so many of this class.

A STARTLING wave of crime is now sweeping over the New England States, characterized by assaults, mostly fatal, and usually committed by inebriates occupying positions of life called the middle classes. Ten such cases are recorded in which inebriates who are of the working classes, actively employed, either so-called moderate drinkers, or those who drink to excess at intervals, have coolly committed murder. All of these cases drank heavily before the act, and the motive was not clear, or the consciousness of the crime manifested by the criminal. In all these cases a jury will decide the mental state of the prisoner. Lawyers and experts will exaggerate and minimize the facts of the crime. The judge will gravely point out the legal test of responsibility and accountability, and some of these criminals will be punished by death. In all these trials the same delusion and profound blunder will exist, *viz.:* that it is possible for a man to use alcohol to stupor, at intervals or continuously, and be of sound mind capable of determining the nature of consequences of his acts; also that it is possible for any one poisoned with alcohol to have normal reason and sanity.

THE great principle of cause and effect is not understood in the ordinary discussions of inebriety. The capricious and accidental and the apparent is accepted as the real, and no effort is made to eliminate or to discriminate causes. Here, as elsewhere, occurs the old mistake of accepting the mysterious and supernatural as the real without question or doubt. It is easier to call inebriety a sin and moral disorder

than to inquire into the physical conditions of the life of the person. The progress of scientific thought demands a study of the relations of causes and effects. Knowledge that does not include the facts of the relationship of causes is of little value. The evils that we deplore and seek to remove remain until we find the causes and apply our remedies here, then the effects disappear. In human life the range of causes are so complex, and the point of departure from the normal is so obscure, that only a critical study will indicate in a general way the present condition. The inebriate represents a wide range of causes that have concentrated into the desire for spirits. This is simply an effect, some lowered state of the nerve centers, and functional activities, which find relief from the narcotism of alcohol. The early causes of inebriety work uniformly and have a distinct relationship, which are seen in some cases and are not in others, proving that our means of examination are still imperfect. The central law of the universe is the same here as elsewhere; an orderly sequence of cause and effect reigns supreme. Inebriety is the effect, and the causes are clear and tangible to rigid scientific scrutiny. The spirit of modern research demands the facts for every theory and every system of relief, and calls in question every statement concerning inebriety and its treatment that is not along the line of cause and effect.

RETROGRADING.

The lawmakers of Minnesota and their friends have at last gone back to the old statutes, which have everywhere been failures. The inebriate is thought to be cured by fines of from 10 to 40 dollars for the first offense, from 40 to 60 dollars for the second offense, and ninety days in the work-house for the third; nothwithstanding the experience of every large city and town of this country and Europe, also the statistics of courts covering a quarter of a century, showing that such means are not only useless, but encourage the very conditions they seek to remove. The delusion that

such remedies are effectual continues. The gold cure specifics and all the modern "short cuts" are scientific advances compared with these methods. Some day, not far off, an awakening will take place, and the blind Solons of that State will realize that to ignore the experience of the past is to fall back into delusions and errors that are both degenerating and destructive.

THE assertion that cases of opium inebriety never permanently recover is not true. A number of cases occupying positions of trust are well known to have been opium-takers and fully recovered. Others of this class conceal this part of their history, and are only known to physicians who have had personal care of them. The better class of alcoholics and opium inebriates, who make a permanent recovery, are rarely known to the general public. They seek retirement, and never pose as cured men, either from a feeling of shame at their own former condition, or fear to revive old memories and impressions that are more and more painful as they recede. The men who seem to take pride in publishing the fact of their cure are most likely to relapse. The opium cases who disappear from view are either permanently restored or contract some acute disease and die. Many relapse and become alcoholics, or use cocaine or some other narcotic drug; but they are never concealed, and always appear as anxious seekers for some sources of relief. The reason for the belief that opium cases are incurable is based on the observation that practically many are incurable before they go under treatment. From this class all others are judged.

IT is a great mistake to suppose that no injury follows from the use of spirits, because there are no apparent symptoms. The so-called moderate use of spirits may continue for some time and no particular symptoms will be recognized.

Statistics and statements of the harmlessness of spirits, based on observations of moderate drinkers, are always misleading. Sooner or later, the delusion is unmasked, and premature old age, acute organic affections, sudden death from trivial causes, heart failures, palsies, and many other diseases noted for their excessive fatality will follow. Beyond this the defective children which come after tell the story of the progressive degeneration following the continuous depression of the delicate nerve cell and fibers. The physical failures, the early mortality, and exhaustion and low vitality are traceable clearly to this one cause coming on step by step. No other poison is so positive in its effects and so difficult to recover from. Syphilis and malaria can be seen and in some slight measure neutralized and prevented, but the effects of continuous use of spirits is followed by injury beyond any present knowledge to remove and prevent. The use of spirits may be checked, but the injury following is not repaired; there is loss of vitality, loss of cell force and co-ordination and impairment of the finer functions of brain activity, both chemical, physiological, and psychological. In a word, the moderate drinker is not in a normal state, and is becoming more abnormal every day he uses spirits.

JOHN DOE had a severe war experience; besides several wounds, he suffered at Salisbury as a prisoner for a year. He became a very successful business man after the war, and occupied many places of trust. He was temperate, and considered a strong, vigorous man. When fifty he had an attack of rheumatic fever, and began to drink spirits to excess. Two years later he was a periodical inebriate, and had manifested homicidal tendencies when intoxicated. In a consultation two physicians —one in charge of an inebriate asylum, and the other an insane asylum — agreed that he should go under treatment in an insane asylum for a year. Later an eminent neurologist opposed this conclusion, and wrote a severe arraignment of lunacy specialists

who would consign every one to asylums on the slightest pretexts. He took pains to sneer at all inebriate asylums and their managers, and call the theory of disease "a fad." Finally, he defended home treatment of the insane, and pointed to this case as one saved from the blighting effects of asylum treatment. Six months later John Doe, during a paroxysm of drink, shot and killed his wife and child; then killed himself. We have only to add that this neurologist is a teacher, and may possibly awake to the realization that there are more facts in science than he has ever dreamed of.

DR. MASON'S report, which appears in this number, is the first official action taken by a medical society in this country on the first care of persons found unconscious on the street with an alcoholic breath. This journal has repeatedly called attention to the very grave mistakes which follow the policeman's diagnosis, and often the hasty judgment of physicians, on such cases. This is the first authoritative medical inquiry made in this country on this topic, and reveals the fact that the present methods are very crude compared with other countries. There can be no doubt that many valuable lives are sacrificed every year from neglect in failing to recognize the actual condition of the person found unconscious on the street, and give the proper care essential at that time. The delusion that an alcoholic odor is proof of drunkenness and that the victim requires no special care is common in this country. In Europe such a person is treated as sick, and an effort made to determine the conditions and causes of this state. In all our larger cities the frequency of the coroner's verdict, "Found dead in the cell, of alcoholism," and where an autopsy is made, hemorrhage, fracture, and other lesions appear, show a wide field for medical inquiry.

The Kings County Medical Society have taken the initiative, and will continue this work, through its committee, until some legislative action shall place the subject on a scientific basis.

We have urged in these pages frequently that the indiscriminate treatment of persons found stupid or delirious with an alcoholic odor on the streets is a disgrace to our intelligence, and ought to be changed at once. Leading medical men have sustained our position, and an increasing number of cases bring the strongest reasons for new and rational means of dealing with this class. The secretary of this committee, the well-known Dr. Mason, solicits communications bearing on this topic; also records of cases, and all that will enable him to continue farther studies in this field. Police surgeons and hospital physicians who are called to make the first diagnosis of such cases will find a new field of facts of intense practical interest. Many lives now sacrificed through neglect will be saved when these obscure cases are understood and treated properly.

THE dangers of cocaine are recapitulated in the *American Journal of Ophthalmology* in a paper by Dr. Albert R. Baker of Cleveland, who collects a list of ten fatal cases of poisoning by the drug. The smallest fatal dose where a measured quantity was given was two-thirds of a grain, which was injected into an eye with the result that immediate unconsciousness was produced followed by death in four hours. One grain injected into the gums by a dentist produced death in a few minutes. The application of a ten per cent. solution to the larynx with a brush was also fatal, unconsciousness following almost at once and death in three hours. The author also reports a case where the instillation of a six per cent. solution into the eye was followed by alarming depression, with periods of unconsciousness attended with delirium. Other and similar cases have been reported. — *Northwestern Lancet.*

MRS. SILVER of Detroit has been awarded a verdict, $1,100 by a jury, against a saloon-keeper of that city who sold liquor to her husband after she had told him not to do so.

Clinical Notes and Comments.

INTERESTING CASE OF ALCOHOLIC INEBRIETY.

MODIFIED FAILURE OF STRYCHNIA NITRATE.

S. W., age 50, has been a periodical inebriate for more than thirty years. At one time was a total abstainer for a period of eight years. When called to this patient first, he had been drinking heavily for six weeks. His history included four treatments by the Keeley method, with only temporary relief. I regarded the case as one suitable for prolonged institution treatment, and so expressed myself. As this did not meet the approval of the family, the case was put upon strychnia nitrate, gr. $\frac{1}{24}$ t. i. d, hypodermically, together with small doses of the bromides, with digitalis and trional gr. xx as a hypnotic. No alcohol was allowed. The following morning, twelve hours after, tremor excessive, mind clear, and will co-operative; examination of urine negative. Improvement from this point was rapid, and in four days the patient was out and attending to his business, which was extensive.

He continued to improve for six weeks, when, hearing some bad news, he began drinking; was again put under treatment, with the same results, followed by relapse in about the same length of time. In these relapses it was noted that small quantities of alcohol would be followed by an active delirium. Hallucinations of sight and hearing, with delusions, especially of place, were prominent symptoms. A modified condition of ambulatory automatism was also noted.

Following the last period of drinking was a condition of delayed ideation, speech thick, wrong selection of words — not amounting, however, to total aphasia, as the right word

would be recollected if sufficient time were given. Accounts in great detail would be given of imaginary occurrences, the patient recognizing that it was not probable that these things really did occur. Inco-ordination of muscular movements extended to such acts as buttoning clothing and to walking. A tendency to watch the feet, as in locomotor ataxia, was noticed. At the same time the pupil-reflex and patellar-reflexes were normal, and swaying with the eyes closed was not excessive. No hemiplegic symptoms developed. The patient had during the latter period of his history two falls, striking the head in both instances; but presented no symptoms directly after. Headache at no time a prominent symptom.

Two weeks' abstinence from alcohol was sufficient to very largely show a recovery from all the symptoms recorded.

The case is especially interesting in view of the pathological problems presenting. The question of meningeal hemorrhage I was disposed to throw out, on account of the lack of headache and absence of hemiplegia; but rather attributed the symptoms to a tendency to neuritis, affecting not only the peripheral nerves, but also affecting the cortical brain cells.

It would be a pleasure to me to see the opinions of others on this subject.

E. F. ARNOLD, M.D.,
28 E. 20th St., New York City.

We have received a package of reprints of the following papers, by J. H. Kellogg, M.D., the well-known superintendent of the famous Battle Creek Sanitarium: "Experimental Inquiries Respecting the Physiological Effects of Alcohol;" "A New Dynamometer for Use in Anthropometry;" "Important Discoveries Relating to Digestion;" "The Influence of Dress in Producing the Physical Degeneracy of Women;" "The Relation of Recent Bacteriological Studies to the

Etiology of Typhoid Fever;" and several other very interesting surgical papers. Dr. Kellogg is a very prolific, original, and graphic writer, and all his articles are always timely and suggestive. Copies of these and other articles will be sent on application to the author.

CASE OF TOBACCO DEAFNESS.

Among the poisons for the nervus acustims Politzer names tobacco as well as chininum, acidum salicylicum, morphinum, chloroformum. And also Dvorzak and Heinrich who, under the auspices of Schroff, intoxicated themselves acutely by nicotinum, enumerate thickness of hearing among their symptoms. The following case, in which the nervous data of the family are hemiplegia spartica infantilis of a sister and idiocy of a cousin, may be of interest. J. P., aged 14, had become dull of hearing since four years; last summer he improved a little, but the next winter he deteriorated again, so that his family called him completely deaf. Inquiry learned that the left ear was nearly deaf, and the other one very dull of hearing. The membranæ tympani were normal. There was a light catarrhus of the pharynx. No amblyopia. Sensorium intact. Pupil- and patella-reflexes present. Pulse without particularity. No growing thin, no tremor, all functions normal. He smoked and chewed tobacco the whole day, so that the consumed quantity of tobacco even at a rough guess was not to be calculated.

The severe prescription to use no tobacco at all, and to take much food, had the consequence that after three weeks he heard well again, which after six weeks (February, 1894) still was confirmed. The boy, who had grown thicker meanwhile, in the beginning of May became dull of hearing again, and it was proved that he had chewed tobacco again during the last three weeks. New severe prohibition had the result that he now hears very well.

DR. PIERRE F. SPAINK.

Apeldoorn, Holland, 20 May, 1894.

THE REMEDY PAR EXCELLENCE. — In the April, 1894, number of the *Universal Medical Journal*, the companion publication to the "*Annual of the Universal Medical Sciences*," a magazine covering the progress of every branch of medicine in all parts of the world, and both edited by Chas. E. Sajous, M.D., Paris, France, we find the following notice of antikamnia extracted from an article by Julian, which originally appeared in the *North Carolina Medical Journal:* "The importance attached to this drug, I think, is due to its anodyne and analgesic power, and the celerity with which it acts. As an antipyretic in fevers, it acts more slowly than antipyrine, but it is not attended with depression of the cardiac system and cyanosis. Whenever a sedative and an analgesic together is indicated, this remedy meets the demand. In severe headaches it is the remedy *par excellence.*"

We invite attention to the advertisement of the Physicians' Mutual Manufacturing Company of Chicago. This company was organized two years ago to manufacture and sell direct to the physicians for cash, its object being to supply pure and accurate prescriptions with full amount of drug and pure drug in everything they make, that the physician can always rely on effect. As they reserve no profit for druggists, traveling men, or bad debts, they can afford to sell very close. They have stockholders in every State and their goods are guaranteed satisfactory or money refunded. Give them a trial. They sell Quinine in tablets at 40 cents per ounce, and make up anything listed by other manufacturers at about 25 per cent. less than their prices.

We have received two very excellent volumes from the Open Court Publishing Co., Chicago: one on diseases of the will; the other on double consciousness, which we shall review in our next.

THERAPEUTICS OF TRIONAL.

In an inaugural dissertation presented to the University of Freiburg, Dr. Otto Bakofen gives an interesting review of the extensive literature of Trional, and calls attention to the unanimity that exists in the views of authors as to the excellent properties of this remedy. The advantages of Trional consists especially in its reliability and efficacy in those conditions of sleeplessness in which experience has shown it is most difficult to obtain permanent results. This applies more particularly to simple agrypnia and the insomnia of persons suffering from mental diseases or excitement due to alcohol. In cases of simple insomnia Trional has always proved effective; while favorable testimony is more and more accumulating with reference to its utility in cases of alcoholic excitement, which are known to be rebellious to other hypnotics. Among mental disorders, even violent maniacal excitement has been successfully controlled for a prolonged period. The morphine and cocaine disease has also been treated with excellent results by Trional. Of especial note is the extremely favorable opinion expressed by Collatz on the ground of his personal experience with it in cases of cardiac affections. According to his observations patients suffering from serious heart lesions bear well the remedy, even when continuously administered, and experience considerable relief of the distressing symptoms. It should also be mentioned that Trional acts in smaller doses than Sulfonal and also more promptly than the latter. Its use is rarely attended with after effects, but these, if developed, are less marked than those observed from Sulfonal, although the experience of the last few years has shown that with regard to both these drugs sequelæ always result from an improper method of administration, and can be readily avoided. The conclusions deduced by Dr. Bakofen from his experiments on animals are that Trional is perfectly free from toxic effects when employed in the medicinal doses and in the manner prescribed by competent clinical observers.

There are two or three symptoms in the latest treatment of narcomania which I would like explained, *viz.*, Why does the free nightly exhibition of trional induce aphasia (temporal)? Again, in the substitution of codeine *vice* morphia it is a fact that one great purpose is subserved (and not known to those who write), *viz.*, that while morphine induces an almost uncontrollable desire for alcoholics, codeine, *per contra*, does away with all desire for alcohol. So a grand point is gained, because the moment a narcomanic flies to alcohol, when he is reducing the amount of morphia-taking, then all his powers of resistance are thrown to the winds, and he flies at once to an extra dose of morphia. All this is prevented when codeine is used *vice* morphine. Again, diaphoresis, especially during sleep, does not take place under codeine, and thus the patient's strength is subserved.

MEDICUS.

SANITAS GRAPE FOOD.

For years the need of some form of grapes that would combine the natural sugars and acids, without the products of fermentation, has been felt as a want that would be realized in some way. Recently we have tested a product that is offered to meet this demand. A company established at Los Gatos, California, one of the great centers of the grape-growing region, have adopted a process of concentrating grape juice and checking fermentation, leaving the product the same as freshly expressed juice. Chemical analysis and other tests prove this to be a fact. The product put up in quart bottles, representing over a gallon of juice to each bottle, has so far exceeded all expectations. In our experience it is in flavor and effects the same as the grape. In the few cases of nervous and nutrient debility it has proved of great value. We have many reasons for believing that this product will come into general use, both as a tonic drink and medicine, simply because it combines naturally salts and acids only found in this fruit. Unfermented grape juice, that retains the natural products of the

grape, has only to be tried to be accepted and adopted as the great drink tonic of the times. We take pleasure in urging our readers to try this grape food, or rather grape juice, as a medicinal agent as well as a tonic drink in hot weather. The New York agent is N. Barbour, 77 Warren street.

HABITUAL MISCARRIAGE. — Dr. Rasquinet, Jupile, near Liege, Belgium, says: "I tried Aletris Cordial in the case of a woman who had had several miscarriages at the end of five months, and who is now again pregnant, having reached the seventh month. Thanks to Aletris Cordial."

THE CROCKETT ARSENIC LITHIA SPRINGS.

These springs are on the Roanoke river in the Alleghanies of Virginia, a few miles from Norfolk, Va. Although known for many years, only recently have they come into prominence and their medicinal value been understood. They belong to the warm spring class, and are used both for drinking and bathing. Through the kindness of the resident physician, Dr. Pedigo, we have made a very satisfactory study of the effects of this water. Selecting cases of nerve exhaustion and digestive derangements, coming both directly and indirectly from alcohol and opium, large quantities were given daily on an empty stomach, with a very marked improvement. A chemical analysis indicates lime, magnesia, potassium, lithium, and arsenic, with iron and various minerals, including bromides, iodides, silicic acid, and phosphates, all remedies of known value. In our experience the water proved in every case an admirable stomach tonic and corrective, also a decided laxative. In insomnia its effects were very marked, and all the cases in which it was used showed an increased appetite and digestion. The skin improved, giving decided hints of the action of arsenic. From our limited experience we very cheer-

fully recommend this water as worthy of a trial, and if the invalid could go to the springs it would give greater promise of success and cure. We shall notice this spring and water again.

Dr. Sparks' Home, noticed in our advertising pages, offers excellent opportunity for the treatment of women.

Parke, Davis & Co's new preparations of *Quinine* and *Peruvian Bark* are great improvements on the old forms of this drug.

Abbott's Granules is the perfection of science in concentrating and making palatable drugs that have been unpleasant to take. Write to Dr. Abbott of Ravenswood, Chicago, for a circular.

We have always found *Horsford Acid Phosphate* a remedy of great value, and one that cannot be left out in the general practice of medicine.

The *Bromo Potash* of Warner & Co's manufacture is always palatable and safe, and is one of the few remedies we always urge our patients to take with them when they leave our care.

Fellows' Hypophosphites is a remedy we always take pleasure in recommending, and find the best results to follow its use in most cases of nerve exhaustion.

Bromidia and *Papine* are two remedies that are invaluable in all cases of inebriety, and are useful in many other cases of disease.

Dobbins' Electric Soap should have a trial in all hospitals. It has many claims for superiority.

Celerina will in many cases remove the pain and neuralgia so common in alcohol and opium inebriety, and should be used in all cases. The Rio Chemical Co. will send a sample bottle to any one for test.

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

By Alfred W. Campbell, M.D.
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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; tbe 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

cases far advanced, the patient is not necessarily free from danger.

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, $\frac{1}{8}$ 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.,

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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 land-marks 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 annnal 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-

tine 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, wavy 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. Ribat. 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 use 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. But, 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.*

Bromo Soda holds its own on its merit. For nervous headache and stomach headache, insomnia, brain tire, debility, vertigo, and headache after taking opium or morphine it has but few equals, if any superiors. And it is "so nice" to take, and the effect is like magic in the majority of cases. It is one of the things one does not like to be without night or day. — *From the Army and Navy Magazine.*

For some years we have called attention to Morris & Co.'s Safes of Boston, Mass., and feel sure no other manufacturer

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.